proposed that the Municipal Commissioners should purchase the Baptist Mission tank, and enlarge it for the use of the public and for convenience in watering roads. There was some delay in procuring the land of the Baptist Mission, owing to the fact that it was found more extensive on measurement than it was supposed to be, and some difficulty in adjusting the boundaries occurred. The purchase was completed on the 28th of February 1870 at a larger cost than was originally contemplated, and other land had to be purchased that the excavation might be brought up to the side of the grand trunk road. The cost of it stands as follows :—

(1) Baptist Mission, 1 biggah 4 chittacks, Rs. 700; (2) Joe mistry, 4 cottahs 2⅔, Rs. 291-10-6; (3) Tarachand Kamar, 1 cottah 4. Rs. 67; total Rs. 1,058-10-6.

The cost of land has been great, but the rate, considering the locality, is moderate; a portion of 9 cottahs 8 chittaks still remains at the disposal of the commissioners. The area of the tank with its banks is 1 biggah 1 cottah, a pathway of 6 feet surrounds it.

With earth excavated from it, three shallow unnecessary ponds in the vicinity have been filled up; the cost amounting to Rs. 250 about will be recovered from the owners. During the visit of the Sanitary Commissioner of Bengal to Serampore in the month of November, he strongly insisted on this duty of the commissioners, namely, to provide large public tanks at intervals throughout Serampore, and with the earth excavated to fill up the smaller uncared for private ponds. Of course sanitation and conservancy in accordance with such a suggestion becomes a mere matter of money, and must be carried out gradually.

The purchase of land is the main difficulty, and I hope the coming year will see us rid of it, for the Gossain family have liberally offered to sell at low rates to the commissioners a large plot of low land near the railway station, and as soon as the negotiations are completed, a large tank will be excavated, and the earth will be used to fill up all holes and pools in Brahminpara, Queen street, and the sides of the railway along the new road which has been commenced on the east side of it.

The work third in importance executed by the conservancy coolies last year is the clearing and adjusting of the drains of the imperial road, usually called the grand trunk road, from Connagore to Chattra, a distance of 4 miles. The drains and embankments of the road seem to have been neglected for a long period. The jungle in the drains and alongside of the road was very dense; the drains were full of uneven pits. For this work the municipality incurred considerable expense, which is not to be regretted, for now the road presents a respectable appearance, and the Department of Public Works now employ coolies to keep the jungle down.

Besides these works the conservancy coolies were employed in—

1. Clearing all the main drains in Serampore.
2. Clearing jungles from private enclosures.
3. Executing earth-works and embankments.
4. Renewing all the kutcha roads.
5. Preserving the banks of the Hooghly from the encroachments of the river.

The ameens, besides supervising the coolies, prosecuted all cases instituted under Act III., 1864, and the bye-law, the details of these duties, are given further on.

The domes during the past year did fair service; they are very idle: their duties were.—

1. The removal and burial of all corpses unclaimed by relatives.
2. The removal and burial of the bodies of animals.
3. The destruction of pariah dogs.

The vaccinator was appointed under resolution No. 3, passed at a special meeting held on the 3rd of January 1870; his services were retained till the middle of March. No returns were submitted to the municipal office. He was placed under the direct supervision of the civil surgeon. His operations appear to have been successful. The numbers vaccinated by him as follows :—

January 1870, 106; February 1870, 319; March 1870, 106; total 531.

The civil surgeon recommended the vaccinator's services should be dispensed with in March, as the weather was too hot to vaccinate.

Night-soil removal.— For the removal of the night-soil of the town, the following establishment is provided :—

1 sircar, 1 jemadar, 8 mehters.

This branch of conservancy has been a continual source of trouble and annoyance to all concerned with it during the year, owing to the impossibility of procuring conscientious agency.

It appears that the removal of night-soil from private premises by public agency was determined on at a meeting of the commissioners held on the 23rd of October 1868. It was also proposed to place latrines in the most thickly populated districts; a piece of land for the burial of night-soil was acquired in a convenient spot.

The fees for the removal of night-soil from private premises were fixed on the following scale— :

Houses rented or valued at (1) Rs. 100 per month and upwards, Re. 1; (2) Rs. 50 and under Rs. 100-8 as. (3) Rs. 25 and under Rs. 50, 4 as.

It will be seen from the statement below that the arrangements do not pay for themselves; that the loss to the municipality is considerable.

Wages of mehters and of sircar, Rs. 569-14; rent of lands, Rs. 36; cost of 2 latrines, Rs. 444-14-6; total Rs. 1,050-12-6.

Whilst the receipts stand as follows:—

Night-soil removal fees, and fees levied from mehters for use of municipal lands, Rs. 489-6-3 rent of latrines, Rs. 39-15-9½; total Rs. 529-6-½.

The measures are tentative only, and probably as the people grow more used to them, the loss to the municipality will not be great. Four public latrines have now been established within the municipality: one in the hât of Serampore, a second near the magistrate's cutcherry, a third at Bullubpore, and a fourth in Connagore bazar. Of these, the one in the hât pays its own expenses.

Police.—The cost of the police is very heavy; but when it is remembered that within the municipality there are four police outposts, and the jurisdiction from north to south is five miles long and most thickly populated, the expenditure appears moderate. The strength of the force and its distribution is given in the following statement:—

Station.				Head Constables.	Constables.
Serampore	...	...	...	1	25
Chattra	...	...	...	1	16
Mohes	...	...	...	1	15
Connagore	...	...	...	1	16
Rishera	...	...	...	...	8
Total		...	...	4	80

In the expenditure one item of Rs. 1,728-3-6 appears for the building and maintenance of outposts; this item requires some explanation. It appears that the Municipal Commissioners were in the habit of advancing money to the district superintendent of police on that officer's estimates, in order that he might keep the police outposts in repair. The present Vice-Chairman found that no accounts for the final adjustment of these advances could be procured from the district superintendent, and finally with a view to prevent future difficulties on the subject at a meeting held on the 6th of August 1869. Mr. Rochfort, district superintendent of police, proposed that the care and maintenance of the outposts be transferred to the commissioners; this was resolved on, and the district superintendent refunded Rs. 488-9 then in his hands on account of repairs of outposts. Afterwards, at a meeting held on the 8th of October 1869, estimates for new outposts at Connagore and Serampore were submitted to the commissioners, who sanctioned the immediate construction of the Connagore out-post at a cost of Rs. 1,044-4-7. This building has been completed; it is a neat and compact construction of brick cemented with mud with a pucka roof: the whole is thickly plastered and very substantial.

The outpost is situated on high land, and well raised above the level of the neighbouring land, and it is hoped that the police force located at Connagore will enjoy better health than before; for it was on account of the sickness prevalent during last rainy season that the commissioners consented to the heavy expense of the building. The Serampore outpost is in course of construction, and will be completed before the commencement of the rains.

The cases and the work of the police, under Act III. 1864, are given further on.

Roads.—Under this head the budget of 1869-70, provided the inadequate sum of Rs. 2,000 only, more than this was expended in metalling unmetalled roads and lanes. Some of these were metalled in consequence of large contributions made by the residents, some of which were collected last year.

The repairs of metalled roads amounted to Rs. 2,205-1-6; they were urgently required.

These heavy disbursements were necessary, chiefly because the roads are narrow and soon wear out. The Chattra road, on account of which the heaviest item was incurred, is very narrow and very long, and required thorough repairs throughout. The expense on account of unmetalled roads has not been great.

The details of these works are entered in the statement of receipts and disbursements, and the expenditure was met from the general balance in hand; it has necessarily been great owing to the extent of the roads repaired. The works were sanctioned after the preparation of estimates, with detailed specification and in regular form.

Local Improvements.—Under this head comes the construction and repairs of culverts New culverts in various parts of the town to the number of 22 were constructed, 5 were repaired. Those built were located with due regard to efficiency and economy, and those only were repaired which required repairs.

Before these works were undertaken, a detailed specification of the work necessary, and quality of material to be used, and estimate of value, were drawn up and sanctioned.

The amount expended in the preservation of the river bank was not great, being only Rs. 188-5-3 against Rs. 1,500 estimated; this is owing to the fact that the sums laid out in previous years were carefully and judiciously expended.

Compensation for lands has been found a heavy item of expenditure, Rs. 1,517-13-6; this has been chiefly disbursed on account of the land for the municipal tank, for Oxford street extension, a road made by my predecessor, and on account of the lands now being taken up for a new road now commenced from the Serampore railway station along the east side of the railway to Bydabatty, the object of which is the drainage and conservancy of the lands adjacent to the railway which have hitherto been deserted to jungle and stagnant water; the road gives access to that part of the town where the fever was most frequent and fatal last year. The road will also by degrees absorb all the traffic from the Bydabatty hât, being in a straight line easy of access from all parts of Serampore.

A severe cyclone passed over Serampore on the 9th June 1869, and demolished all the bazar sheds and the pound; it was therefore necessary to incur some expense to put them in order again, and the opportunity was taken to put the pound and the pound-keeper's lodge on a thoroughly efficient footing, and the bazar sheds were strongly and efficiently erected.

The main drains of Serampore were carefully traced out and re-excavated last rains; in many places where they pass through private premises they had been completely lost sight of, and were filled with rubbish.

Lighting.—The lighting of the town has now grown into an important item of expenditure. My predecessor, Mr. W. H. Ryland, in the annual report of this municipality for 1868-69, noted in paragraph 10 that the experiment of lighting the town had been made with success.

Last year 25 lamps were distributed about the town, and on the 18th December 1868, the commissioners agreed to sanction an addition of 20 lamps; these lamps were purchased and erected on the sites selected by the sub-committee for the purpose at a cost of Rs. 676-15-6, and have been used since the month of December last. The contractor performed his contract very fairly; he was responsible for the lamps and light at Rs. 4 monthly for each lamp. The rates have lately been reduced to Rs. 3-14.

Two or three alterations will be made in the coming year in the sites selected by the sub-committee.

Watering.—The bheesties of Serampore are as unprincipled as the mehters; they have caused infinite trouble during the year, and their work has been badly performed. The establishment consists of 1 jemadar, 14 bheesties, 2 water carts, 2 cartmen.

The more important thoroughfares only were watered during the dry season. The only system of watering consistent with economy and efficiency is by carts, but before it can be introduced 3 pumps must be erected in the following localities: the new tank on the grand trunk road, Roy ghât on the upper strand, and godown ghât on the lower strand.

Pound.—The pound has been very profitable, and the commissioners do not grudge the expenditure in excess of estimate. The receipts were Rs. 874-11. The disbursements were Rs. 389-9-6.

Miscellaneous expenditure.—The amount estimated was Rs. 1,200 only, the items actually expended show that this estimate did not provide for even a moiety of the inevitable expenditure. The following items of rent and house rate were paid :—

		Rs.	As.	P.
1.	House rate of municipal office	38	11	0
2.	Rent of Hât bazar tank	22	0	0
3.	Rent of municipal office	270	0	0
4.	Ditto Burtola bazar	112	8	0
5.	Ditto Hât bazar privy	36	0	0
6.	Ditto Serampore outpost and Chattra burning ghât	17	14	9
	Total ...	497	1	9

Law charges alone amounted to Rs. 919-15-9, but then this item was re-productive as seen from the other side of the account.

Another heavy item under this head is the municipal donation to the charitable hospital; this was agreed to by the commissioners at their meeting dated 18th December 1868, and was sanctioned by Government for six months. The commissioners, on the 3rd December 1869, again sanctioned it, and their resolution was communicated for the approval of Government.

Other items under this head do not call for special notice, with the exception of the item Rs. 164-4-6 expended on account of numbering premises within the municipality. This item ought to have been included under the head of local improvements; it was proposed and sanctioned at a full meeting held on the 11th June 1869; the numbers have all been attached, and their accuracy has been tested.

Mortuary return.—The annexed statement gives the mortuary returns of Serampore and vicinity for the year 1869-70 in the prescribed form :—

		From April 1869 to March 1870.
Deaths at each age.	Under 1 year...	16
	1 to 10 ditto	121
	10 to 20 ditto	56
	20 to 30 ditto	96
	30 to 40 ditto	88
	40 to 50 ditto	86
	50 to 60 ditto	97
	60 to 70 ditto	76
	70 to 80 ditto	45
	80 and above...	14
	Total	695
Cause of death ...	Fever and spleen	571
	Cholera ...	42
	Dysentery ..	43
	Small-pox ...	...
	Other causes...	39
	Not known ..	...

Taking the population of the municipality to be 24,000, as estimated by my predecessor last year, this gives a precentage of mortality about 2·9; it is not unreasonable to suppose that the statement is founded on fairly accurate information. I therefore give the procedure by which it is obtained. In the first place, the police, each constable from his beat reports each death; this information is recorded at the outposts each day. At the end of each week the head constable in charge of the outposts send in a return of the mortality of the past week. These returns are forwarded to the municipal office; in the meantime each conservancy ameen supplies the same information in the same form to the municipal office; the two sets of returns are compared, and the discrepancies reconciled. Often further enquiry is made before the mortality is registered yet in spite of all this care errors occur.

Breaches of Conservancy Rules, &c.—The following statement shows the activity of the police and municipal officers in the suppression of nuisances, and the prevention and punishment of breaches of municipal law and bye-laws :—

Department.	Cases reported.	Cases in which notices issued.	Notices obeyed.	Cases in which summons issued.	Cases in which notices issued.	Cases in which notices issued at works are effected by municipal agency. *(sic)*
Police ...	196	157	136	39	9	7
Overseers ...	687	577	301	230	140	71
Total ...	883	734	437	269	149	78

It will be seen that the police have not exhibited an adequate amount of energy. Four conservancy overseers have effected more than three times the amount of work done by them; this is owing to the want of intelligence of the police in the lower grades: they are ignorant of what constitutes a nuisance, the provisions of the law are unknown to them, and they are innocent of all knowledge of their own power.

The form given below shows the number of prosecutions instituted under the law, and the results :—

Number of cases in which summons issued, 269; number of persons summoned, 315; convicted, 163; acquitted, 152; fines inflicted, Rs. 533-12- .

The figures are small. The percentage of acquittals and convictions is not favorable to the commissioners, either a failure of justice has ensued or prosecutions have been instituted without due consideration. One month the Vice-Chairman had occassion to notice that the percentage of convictions on prosecutions was barely 25.

The following statement speaks for itself :—

Number of cases in which after notices the work required was sucessfully effected 78; after fine 68; without fine 10; costs Rs. 410-3-1; realized Rs. 195-1-6; remitted Rs. 87-8-3; balance Rs. 107-9-3.

It appears from these statements that the municipal agency has neither been mischievous nor interfering; the fines imposed have been light, and the prosecutions few.

The health of the town during the past year was remarkably unfavorable; parts of the town were visited by that severe epidemic fever which of late years has devastated Bengal. The commissioners are fully alive to their duty in alleviating the suffering of the people as far as they can; they have shown a lively interest in sanitation, and have always listened to and adopted the suggestions of the medical officer, both with respect to the town and with respect to the hospital, which has been transferred to their management. By-law No. 19 has been enforced, and thereby the creation of new cess pools and stagnant ponds has been prevented, but the reclamation of those already in existence will prove a matter of time.

By-laws.—After the elapse of more than two years from the date of submission for confirmation, the By-laws of the Serampore municipality were sanctioned by Government in its letter No. 3282 dated 11th May 1869 and have been enforced since the date of publication in the town, 24th February, 3rd and 10th March.

Records.—Measures are now being taken for the due record and survey of all the municipal rights and properties; hitherto there has been no adequate regard paid to the records of the municipality.

Burial grounds and burning ghât.—There are four burial grounds in Serampore belonging to the Church of England, the Baptist Church, the Roman Catholic Church, and to the Mussulman community; the latter of which is not kept in proper order. The burning ghâts are two in number, one the municipal burning ghât, built during the past year with appurtenances at a cost of Rs. 1,982-8-6, which appears under the head of local improvements, and the burning ghât called by the name of Kalee Baboo, concerning which protracted proceedings took place in 1868-69, in consequence of which it was declared closed by the Municipal Commissioners; but on the representation of the inhabitants of Serampore it was declared unnecessary to enforce the injunction until the accommodation of the municipal burning ghât was increased.

Omlah.—The only officers attached to the municipality, to whom credit is due during the past year, are the head clerk, "Takoor Dass Chatterjee," for the energy he exhibits and the interest he takes in his work; and the supervisor of works, Grish Chunder Rooder, for the intelligence and straightforwardness with which he discharges his duties.

The balance to the credit of the municipality at the end of the year was Rs. 1,896-7-6½; it has been already appropriated to works during the coming year.

APPENDIX A.

Statement of demands, collections, remissions, and balances for the year ending 31st March 1870.

Particulars.	Demands.	Collections.	Remissions.	Balances.	Remarks.	Rs. As. P.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.		
House rate 1867-68 ...	1,798 15 11	273 9 0	68 15 6	1,456 7 5	Remitted	1,098 15 7½
					Since collected ...	1 13 3
					Balance	363 10 6½
Ditto 1868-69 ...	8,148 8 3	4,915 12 6	178 2 3	3,054 9 6	Remitted	.....
					Since collected ...	154 14 0
					Balance	2,899 11 6
Ditto 1st quarter, 1869-70	4,806 5 6	4,351 4 6	331 3 6	123 13 6	Remitted	15 12 6
					Since collected ...	64 3 6
					Balance	43 13 6
Ditto 2nd " "	4,806 5 6	4,307 11 9	290 11 0	207 14 9	Remitted	16 0 0
					Since collected ...	84 11 3
					Balance	107 3 6
Ditto 3rd " "	4,806 5 6	3,809 3 3	87 5 0	909 13 3	Remitted	26 6 6
					Since collected ...	357 8 0
					Balance	525 14 9
Ditto 4th " "	4,806 5 6	2,845 11 0	108 9 3	1,852 1 3		
Total ...	20,172 14 2	20,503 4 0	1,064 14 6	7,604 11 8		
Horse and wheel tax, 1868-69 ...	58 8 0	19 8 0	39 0 0	0 0 0	Remitted	47 14 9
					Since collected ...	1,049 0 0
					Balance	756 2 6
Ditto 1st quarter, 1869-70	154 8 0	154 8 0	0 0 0	0 0 0	Total outstanding balance ...	4,695 8 3½
Ditto 2nd " "	162 0 0	161 4 0	0 12 0	0 0 0		
Ditto 3rd " "	146 4 0	133 8 0	0 0 0	12 12 0		
Ditto 4th " "	180 0 0	111 12 0	0 0 0	68 4 0	Since collected ...	18 12 0
					Balance	62 4 0
Total ...	701 4 0	580 8 0	39 12 0	81 0 0		
Ferry farm, 1868-69	643 10 3	423 5 3	0 0 0	220 5 0		
Ditto 1869-70	8,162 9 0	8,162 0 0	0 0 0	0 0 0		
Total ...	8,805 10 3	*8,585 5 3	0 0 0	220 5 0		
Bazar ferry farm, 1867-68 ...	253 8 0	109 14 0	122 8 0	21 2 0		
Ditto ditto 1868-69 ...	449 13 9	83 13 9	0 0 0	66 0 0		
Ditto ditto 1869-70 ...	1,518 0 0	1,518 0 0	0 0 0	0 0 0		
Total ...	1,921 5 9	1,711 11 9	122 8 0	87 2 0		
Grand Total ...	40,601 2 2	31,380 13 0	1,227 2 6	7,993 2 8		

* Rs. 1,113-12 transferred from deposit shewn in last account.

J. A. HOPKINS,
Vice-Chairman.

MUNICIPAL COMMISSIONER'S OFFICE;
Serampore, the 10*th June* 1870.

Municipal Improvement's Fund under Act III. of 1864 *for the year* 1869-70.

RECEIPTS.

PARTICULARS.	Amount. Rs. As. P.	Total. Rs. As. P.	Grand Total. Rs. As. P
To balance of cash brought from last account	...	...	5,531 0 6.
To amount collected on account of house rate of 7½ per cent. upon the annual value of houses, buildings, and lands for 1867-68	273 9 0		
Ditto ditto ditto 1868-69	4,915 12 6		
Ditto ditto ditto 1869-70	15,313 14 6		
		20,503 4 0	
Ditto ditto tax on carriages and horses for 1868-69 ...	19 8 0		
Ditto ditto ditto 1869-70 ...	561 0 0		
		580 8 0	
Ditto ditto fees on registration of hackney carriages and drivers ...	...	104 0 0	
Ditto ditto carts	...	119 0 0	
Ditto ditto offensive trades	...	983 8 0	
Ditto ditto on night-soil removal	...	529 6 0½	
Ditto ditto fines under Act III. of 1864	...	552 0 6	
Ditto ditto bazars for 1867-68	109 14 0		
Ditto ditto ditto 1868-69	83 13 9		
Ditto ditto ditto 1869-70	1,518 0 0		
Ditto ditto ditto 1870-71	337 8 0		
		2,049 3 9	
To amount collected on account of ferries for 1868-69	423 5 3		
Ditto ditto ditto 1869-70	7,048 13 0		
Ditto ditto ditto 1870-71	403 12 0		
		7,875 14 3	
To fines and sale of stray cattles	...	874 11 0	
To distress warrant fees	...	361 8 3	
To deposit received from the ministering priests for Chattra burning ghaut, and after sale of materials belonging to Mudun Mohun Roy and others ...	...	25 1 9	
Ditto ditto on account of contribution for metalling roads ...	...	437 4 6	
Ditto ditto costs in cases against Baboo Gopeekristo Gossain ...	...	1,519 2 10	
To refund received on account of outposts	...	488 9 0	
To amount collected on account of recoveries	...	195 1 6	
Ditto ditto miscellaneous receipts	...	155 10 0	
			37,413 13 4½
Total ...	...	...	42,944 13 10½

DISBURSEMENTS.

PARTICULARS.	Voucher No.	Amount. Rs. As. P.	Total. Rs. As. P.	Grand Total.
Establishment and Miscellaneous Contingencies.				
By establishment of the office of the municipal commissioners constituted under Act III. of 1864.	7, 41, 93, 125, 162, 208, 247, 273, 301, 327, 348, 371 ...	1,223 0 3		
By charges incurred in the collection of rates upon the annual value of houses, buildings, and lands, and taxes on carriages and horses.	1127, 48, 58, 106, 111, 126, 132, 143, 155, 169, 171, 189, 200, 208, 222, 231, 234, 252, 279, 301, 304, 316, 327, 330, 342, 348, 357, 358, 371, 380, 387 ...	1,358 8 3		
By salary of assessor on extra service ...	15, 54, 68 ...	46 0 9		
By pay of extra writers for writing up vernacular registers, &c.	85, 115 ...	30 0 0		
By salary of punkah-puller	44, 93, 125, 162, 208, 247, 273 ...	24 10 9		
By amount paid for office furnitures ...	8, 185, 362 ...	86 0 0		
By printing charges	92, 150, 187, 198, 260, 292, 332, 352 ...	300 8 9		
By stationery	7, 45, 94, 125, 327, 397 ...	58 13 0		
By advertisement and contingent charges ...	7, 46, 72, 94, 125, 145, 162, 208, 247, 273, 301, 327, 355 ...	180 1 6		
			3,306 11 3	
Conservancy.				
By salary and allowance of superintendent and establishment.	162, 253, 274, 302, 311, 329, 349, 373 ...	720 13 0		
By ditto overseers, drain coolies, cartmen, sweepers, and domes.	6, 9, 10, 13, 47, 49, 50, 53, 97, 102, 103, 104, 127, 130, 131, 136, 164, 165, 167, 172, 209, 211, 214, 215, 223, 248, 250, 254, 255, 271, 278, 302, 308, 337, 349, 359, 386 ...	4,268 3 0		
By ditto vaccinator	40, 91, 385 ...	40 0 0		
By establishment of mehters for removing and burying night-soil.	6, 47, 97, 123, 130, 165, 209, 250, 278, 308, 337, 355, 386 ...	569 14 0		
By amount expended for building and repairing gowkhana sheds.	2, 34, 79, 120, 134, 153, 240, 263 ...	75 11 3		
By ditto for cutting jungles and clearing both sides of khâl, and securing banks of tanks, siding public roads.	287, 337 ...	84 9 9		
By ditto expended for making and repairing conservancy carts, &c.	243, 299, 305, 307, 327, 346, 375 ...	282 6 3		
By ditto for cutting jungles and clearing drains of both sides of grand trunk road.	164, 235 ...	72 14 6		
By ditto digging wells in gowkhana ...	30, 372 ...	23 8 0		
By ditto keep of cart bullocks ...	16, 60, 62, 108, 133, 137, 163, 212, 216, 258, 276, 289, 303, 338, 345, 356, 382 ...	209 13 0		

PARTICULARS.	Voucher No.	Amount.	Total.	Grand Total.
		Rs. As. P.	Rs. As. P.	
By amount for purchasing tools ...	... 83, 110, 363 ...	67 15 6		
By contingent charges ...	... 6, 13, 47, 97, 130, 161, 165, 209, 250, 271, 313, 373, 377, 397, 52, 65, 97 ...	77 8 9	6,493 5 0	
Police.				
By amount paid for the maintenance of police under section 34, Act III. of 1861, and miscellaneous contingencies.	20, 55, 87, 100, 139, 183, 221, 251, 283, 314, 340, 365, 391, 393 ...	7,374 3 7		
By ditto clothing allowance ..	... 249 ...	336 0 0		
By ditto expended for building and repairing outposts	381 ..	1,728 3 6	9,438 7 1	
ROAD.				
New metalling.				
By amount expended for metalling the following roads, *viz.* :—				
Bosepara Lane ...	... 285, 298, 321, 334 ...	490 0 0		
Hateerkool Street ...	. 116, 122, 168, 227 ...	433 13 0		
Ooriapara Lane ...	. 193, 202, 217, 228, 259, 265 ...	327 0 0		
Ruttapara Lane ...	. 197, 203, 218, 236, 242 ...	326 4 6		
Brojodutt Lane ...	... 196, 220 ...	135 0 0		
Mookerjeepara Lane ...	... 184, 230, 261 ...	130 5 6		
Punchanuntola Lane ...	... 69 ...	100 4 0		
Theatre Lane ...	... 388 ...	85 14 9	2,028 9 9	
By amount expended for repairs of the following metalled roads, *viz.* :—				
Chattra Road ...	... 42, 118, 149, 174, 178, 190, 206, 210, 213, 214, 233, 248, 259½, 264, 270, 306...	859 10 6		
Takoorbatty Lane ...	... 201, 205, 225, 267, 268 ...	327 9 9		
Brahminpara Street ...	... 6, 12, 26, 47, 84 ...	238 10 9		
Pooratun Bazar Lane ...	... 107, 154, 159, 165 ...	152 12 9		
Royghaut Lane ...	... 107, 154, 159, 165 ...	103 13 3		
Bazar Lane ...	... 33, 107, 148, 152 ...	62 15 0		
Ackland Street ...	... 156, 239 ...	23 0 9		
Petty repairs of metalled roads ...	... 36, 69, 77, 78, 90, 97, 124, 288, 286, 291, 312, 109, 130, 237, 211 ...	436 8 9	2,205 1 6	
Kutcha.				
By amount expended for construction of the following kutcha roads, *viz.* :—				
Barooipara Lane ...	... 64, 96, 121 ...	107 13 0		
Oxford Street extension ...	... 57 ...	31 12 3	139 9 3	
By amount expended for repairs of the following roads, *viz.* :—				
Oxford Street extension ...	... 29, 82, 102, 131, 337, 359	186 13 6		
Andopooker Lane ...	... 377, 389 ...	22 6 0	209 3 6	
Construction and repair of culverts and drains.				
By amount expended for construction of the following culverts, *viz.* :—				
In Oxford Street extension ...	. . 22, 28, 31, 37, 66, 86, 113, 325, 361 ...	460 8 9		
In Sumbhoochunder Chatterjee's Street	... 326 ...	101 0 0		
In Moosulmanpara Lane ...	... 84 ...	22 4 0		
In Bullubpore Strand ...	... 195 ...	73 13 3		
In Bhageerutty Lane ...	... 188 ...	26 5 9		
In Barooipara Lane ...	... 98, 392 ...	72 0 0		
In Rajrajessurrytola Lane ...	... 280 ...	54 0 0		
In Baniapara Lane ...	... 105, 129 ...	40 13 6		
In Brahminpara Lane ...	... 105, 129 ...	40 13 6		
In Chundersikur Mookerjee's Lane	... 84 ...	31 9 6		
In Debpara Lane ...	... 84 ...	26 15 0		
In Potooapara Lane ...	... 88, 113 ...	24 0 0		
In Theatre Lane ...	... 333 ...	23 4 9		
In Ackland Street ...	... 179 ...	20 0 0		
In Chowdhoory Lane ...	... 275 ...	19 0 0	1,036 8 0	
By amount expended for repairs of the following culverts, *viz.* :—				
In Brahminpara Street ...	... 360 ...	31 5 6		
In Chattra Road ...	... 4 ...	19 3 0		
In High Street ...	... 241 ...	6 0 0	56 8 6	
By amount expended for repairs of the following surface drain, *viz.* :—				
In Lower Strand Road ...	... 353 ...	...	12 11 0	
			24,926 10 10	
Improvement.				
By amount expended for building burning ghaut at Chattra with two rooms.	9, 14, 32, 41, 51, 56, 61, 63, 70, 73, 81, 89, 103, 119, 127, 232, 256, 257 ...	1,982 8 6		
By ditto for preservation of river bank	... 130, 135, 209, 229, 266, 374 ...	88 13 3		
By ditto for building and repairing latrines	... 3, 24, 38, 51, 226, 394, 399	444 14 6		
By ditto paid for compensation of lands, huts, and trees taken for public purposes.	144, 315, 322, 323, 368, 379 ...	1,517 13 6		
By ditto expended for repairing bathing and landing ghauts.	335, 350, 101 ...	99 8 0		
By ditto for building and repairing bazar sheds	... 114, 135, 159, 160 ...	190 4 9		
By ditto paid for garden chairs ...	... 117 ...	70 0 0		
By ditto for trees and fencing	... 351, 173, 194, 263, 331 ...	65 0 0		
By ditto for watering trees planted along the public roads.	102, 131, 308, 337, 359 ...	30 0 0		
			4,488 14 6	

PARTICULARS.	Voucher No.	Amount.	Total.	Grand Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.
Lighting.				
By amount expended for street lamps with kerosine oil	1, 10, 80, 95, 147, 192, 238, 272, 300, 328, 351, 369	1,372 8 0		
By ditto for lamps and posts ...	... 142, 166, 191, 245, 294, 307 ...	676 15 6		
			2,049 7 6	
Watering.				
By amount expended for watering roads	... 6, 47, 97, 123, 309, 337, 359, 386 ...	480 15 0		
By ditto for fitting, fixing, and repairing pump	... 74, 347, 384 ...	239 7 0		
By ditto repairing water carts	... 138, 317 ...	42 7 0		
By amount for a pony for ditto	... 43 ...	14 0 0		
			776 13 0	
Pound.				
By salary of pound-keeper ...	... 7, 44, 93, 125, 162, 208, 247, 273, 301, 327, 348, 371 ...	72 0 0		
By amount expended for building and repairing pound	114, 135, 157, 158, 159, 180 ...	214 14 3		
By diet for stray cattle ...	... ...	73 8 0		
By contingent charges ...	... 72, 94, 125, 162, 208, 247, 273, 301, 327, 355 ...	29 3 3		
			389 9 6	
Ferry.				
By amount paid to the amalgamated district road fund being half the net amount realized from farmers for 1868-69.	21 ...	3,577 8 0		
By ditto ditto 1869-70	... 295, 354 ...	2,000 0 0		
By ditto expended for repairing ferry boat, chain and anchor.	170, 181, 204 ...	112 5 6		
			5,669 13 6	
Miscellaneous				
By amount expended for making and fixing premises' numbers and signboards.	112, 246, 281 ...	164 4 6		
By refund of deposit on account of sale proceeds	... 18, 23, 297 ...	377 15 6		
By amount paid for donation to the charity hospital	... 91, 128, 177, 207, 262 296, 319, 336, 385 ...	550 0 0		
By ditto paid to the registering officer on account of remuneration for 1869	393 ...	66 5 9		
By ditto for rent of lands and tanks and house rate	... 25, 59, 71, 146, 176, 182, 199, 236, 277, 284, 282, 290, 293, 317, 318, 344, 364, 366, 386, 395, 396, 224 ...	497 1 9		
By law charges	... 175, 291½, 219, 269, 320, 370 ...	919 15 9		
By amount expended for dismantling and watching elephant lines.	5, 17, 67, 99 ..	45 0 3		
By hackney carriage and cart tickets	... 6, 75, 76, 186 ...	8 2 9		
Miscellaneous and contingent charges	... 141, 244, 250, 327, 339, 359, 376, 390 ...	118 3 3		
			2,747 1 6	
				41,048 6 4
By balance on 31st March 1870	...	...	...	1,896 7 6½
				42,944 13 10½

MUNICIPAL COMMISSIONER'S OFFICE;
Serampore, the 10th June 1870.

J. A. HOPKINS,
Vice Chairman.

Annual report of the Commissioner of the Presidency Division.

II.—Weather and the Public Health.

8. The two cyclones of May 16th and June 9th are the most noticeable features in the weather during the year of report. Both caused considerable damage to property, but, as was specially reported at the time, the injury done to the crops, which were then only newly on the ground, was comparatively slight, except as regards the tract to the south-east of the Jessore district, the neighbourhood of Morrellgunge, where the river Horunghotta affording the cyclone wave an easy entrance into the cultivated tracts, there was an inundation accompanied by greater destruction of houses and crops and human life. Relief measures for these parts had to be organized under the instructions of Government, and were in full operation for a period of nearly four months. A deputy collector of experience and judgment was deputed to distribute money on the part of Government to the really needy, as well as to stimulate the zemindars, all of whom—the Messrs. Merrell specially—liberally came forward and made large advances to the ryots.

9. Soon after the withdrawal of the relief operations an epidemic fever broke out in one part of the storm-stricken country, in the Bagirhaut sub-division. There was a similar outbreak also in the Khoolneah sub-division about the middle of the year. With these exceptions the public health on the whole was very fair in this division during the year. There were outbreaks of cholera here and there, specially in Nuddea, and small-pox also raged in particular localities in the latter district; but there is nothing in the circumstances which call for remark. As a rule, medical aid was sent to the infected villages as soon as was practicable after receipt of information in each case.

In Nuddea the want of good drinking water is a serious evil, and the subject is one daily becoming of greater importance if we are to attempt to deal with any good effect with the sanitary condition of mofussil villages. As stated elsewhere in this report, the local zemindars as a body will do nothing in the matter.

10. In this place I cannot avoid noticing that as the machinery of our Government improves, greater and greater calls are made on us by the village communities for assistance, for money, for doctors. It is quite impossible that Government can keep in reserve a number of officers ready for calls of this kind. It is also quite out of the question that the cost of such deputations should ordinarily be defrayed from imperial funds. The question was mooted during the year by Mr. Westland, the Magistrate of Jessore. It appears to me the solution of it is becoming daily of greater urgency. The subject should perhaps more properly form matter for a special report; but in reviewing the administration of the past year we cannot but feel how desirable it is that the rural communities should be gradually taught to lean less and less in such matters on Government; that they should gradually learn habits of self-reliance and self-help, and understand that if they wish for special help in times of sickness and trouble, they must be prepared to pay for it, or else to suffer for their apathy and want of public spirit.

11. Under this head I may notice that the cattle murrain again broke out during the year in both Jessore and 24-Pergunnahs; in the former in the district generally, but principally on the banks of the Nobogunga, in Magoorah, and in the Khoolneah sub-division; in the latter, at Diamond Harbour, and in some parts of the Busirhaut and Satkhira sub divisions. The type of disease was precisely that of the previous year, though, as regards the 24-Pergunnahs, far less virulent. At Diamond Harbour the instructions given by Dr. Farrell, veterinary surgeon, who had been deputed to give aid in the preceding year, were followed out, and the outbreak ceased after the occurrence of from 600 to 700 deaths. The loss is slight compared with that of the previous year; the cattle destroyed in 1868-69 having been estimated at no less than 26,000 head. The disease broke out a second time during the year at Diamond Harbour about the end of February: but it disappeared in a few days, causing scarcely much loss. Mr. Farrell was again employed during the year of report, first at Jessore for a period of four months, and afterwards at Busirhaut and Satkhira in the 24-Pergunnahs. In Nuddea the disease appeared in some of the villages of the Ranaghat sub-division, but hardly in the form of an epidemic, and it did not continue long. Recently, under the orders of Government, a very complete set of rules for the treatment of diseased cattle has been extensively circulated in the division. In the case of any recurrence of the epidemic some good may, I trust, be anticipated from the measure.

III.—Public Charities.

12. The orphanages at Agurparah, Kishnaghur, and Magoorah, continue to receive Government support in the shape of a monthly contribution of Rs. 2 for each orphan sent in by the civil authorities. The only other institutions coming under the head of "Public

Charities" in this division are the dispensaries. Subjoined is a tabular memorandum of these institutions, showing their receipts, disbursements, &c., in the year of report :—

Districts.	Dispensaries.	Number of patients.			Receipts.				Disbursements.		
		In-door.	Out-door.	Total.	Balance.	Subscriptions collected.	Government donation.	Total	Establishment.	Total expenditure including establishment.	Balance.
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Jessore	Jessore	216	3,397	3,613	309	1,180	1,260	2,749	1,814	2,445	304
	Magoorah...	78	501	579	458	434	508	1,410	764	1,057	353
	Bagirhaut...	1	539	540	308	157	.....	465	92	126	339
	Sreedhurpore	.....	1,125	1,125	358	480	480	1,318	758	808	510
	Umritobazar	20	662	682	10	753	480	1,243	870	1,045	198
	Nubhanga...	.....	1,731	1,731	59	480	480	1,019	539	905	114
	Kheolnah	.....	731	731	111	480	480	1,071	783	829	242
	Jenidah	.....	1,711	1,711	632	316	480	1,458	612	698	770
	Dowlutpore	.....	917	917	593	479	480	1,552	632	712	840
	Kaitparah...	.....	313	313	78	331	289	698	521	550	148
	Kalia	.....	2,110	2,110	129	249	458	836	732	786	50
Nuddea	Chaudoora	.....	1,087	1,087	23	410	455	918	666	749	169
	Kishnaghur	125	3,587	3,712	433	531	2,856	3,820	2,981	3,415	405
	Chooadanga	7	1,128	1,135	69	569	480	1,118	650	871	247
	Ramghut...	.....	873	873	2	288	.....	290	125	188	102
	Mehirpore	.....	3,091	3,091	142	506	550	1,198	730	820	378
	Kanchrapurah	.....	1,259	1,259	10	240	392	642	444	635	7
	Beerungaur	.....	2,402	2,402	.....	363	446	809	559	605	204
	Kooshtea	.....	1,968	1,968	148	611	730	1,522	959	1,302	220
24-Pergunnahs	Alipore	155	1,375	1,530	1,839	350	3,021	5,210	2,916	3,919	1,291
	Bhowanipore	7	5,735	5,742	.....	.....	2,831	2,831	2,358	2,831	.....
	Baraset	28	5,596	5,624	.....	650	120	770	556	765	5
	Busirhaut...	.....	1,112	1,112	1	93	480	574	528	546	28
	Takee	.....	1,349	1,349	.....	830	480	1,310	680	1,065	245
	Goburdanga	.....	1,659	1,659	1,627	900	720	3,247	906	1,226	2,021
	Satkhira	10	1,595	1,604	1,844	614	1,200	3,658	1,665	2,341	1,317
	Sreepore	.....	2,258	2,258	.....	460	467	927	714	831	96
	Bistoopore	.....	2,225	2,225	.....	213	240	453	366	437	16

13. The list for the 24-Pergunnahs is exclusive of the North Suburban Hospital at Chitpore. The dispensaries at Sreepore and Bistoopore were newly established during the year.

14. The Government is aware that the dispensary at Barripore is maintained exclusively at the expense of Baboo Bussunt Kumar Rae Chowdhri, and at Goburdanga the late Baboo Saroda Prosonno Mookerjee's liberal contribution was the chief support of the dispensary in the village. Since the Baboo's death the Court of Wards, which has charge of his estate, has authorized a continuance of the same amount of support to the institution.

15. A full and satisfactory report of the North Suburban Hospital for the year 1869 has lately been submitted to Government. As a measure of charity the hospital is a decided success. A suitable building seems to be all that is now required to give permanency to the institution. The necessary funds for the purpose are in course of being raised.

16. In Jessore one* new dispensary was opened during the year; but it has already been shut up under the orders of Government, owing to the small collections. With regard to those now in existence, the Magistrate complains there has been the "same struggle as before to keep up the funds of the institutions." It seems to me where the subscriptions are not regularly paid in, it may safely be inferred that the institution is not in favor with the people, and therefore not much of a want; and I think under such circumstances the Government aid should invariably be withdrawn. No doubt the enthusiasm under the pressure of which these village dispensaries are usually started is too often evanescent, and when the immediate personal supervision of an energetic officer, at whose suggestion probably the institution was originally started, is withdrawn, the local interest dies away, and the subscriptions dwindle to nothing. The following remarks by Mr. Westland on the subject seem worthy of being extracted in this place :—

* Noaparah, in the Bagirhaut sub-division.

"In the dispensaries at Umritobazar and Kaitparah especially, it is very difficult to collect the subscriptions, and they require constant attention. In very few of them is it the habit to continually collect and pay up the stipulated amount with regularity.

There is one reason for this which arises from our system of management. We pay Rs. 40, the native doctor's pay, and stipulate that Rs. 40 shall be subscribed to meet other expenses. But these other expenses do not come to Rs. 40, often not even to Rs. 25; and the committees, aware of this, are very apt to think they do all that is necessary if they pay up only the amount necessary to keep the dispensary going.

Those of the dispensaries which are kept up by a single subscriber, or by one or two only, are always in a flourishing state, and by their having a revenue of Rs. 40 a month, accumulate funds, which at present cannot be spent without giving the idea that we are rather looking for something on which to spend money than seeking to manage the dispensary economically. I think the new provision, that the dispensaries should pay for their own European medicines, is a very good one, and one that will solve this difficulty. There is not a dispensary in the whole district which could not meet this charge if the conditions of its establishment were only kept up to."

17. I venture to think the present system admits of some improvement, and here again I would say local self-reliance is the principle we should do our best to inculcate.

18. In Nuddea two new dispensaries, one at Kurulgachee and another at Santipore, were successfully started during the year. Mr. Monro reports the dispensaries in the district have all done a fair amount of good; but here also the difficulty of collecting the subscription is the constant complaint. At Kishnaghur itself, where there is a large native community, the small proportion of local support the hospital receives* is apt to make one think that the institution has not the sympathy of the native public, yet the large number of native patients on the books, both in-door and out, would belie such a conclusion. The remark will apply generally to all similar dispensaries in our district chief towns.

Monthly subscriptions.

	Rs.	As.	P.
Government grant ...	237	8	0
European subscriptions ...	32	0	0
Maharajah's ditto ...	10	0	0
Native community ...	9	8	0
Total Rs. ...	289	0	0

IV.—Crops.

19. In the 24-Pergunnahs the crops were unusually good, specially in the parts where from 1865 to 1868 distress in a more or less severe form had prevailed. In Jessore the crops were good in the east and south of the district, fair in the north, and though in some places in the west complaints were heard, still even there nothing like hardship was felt. "The cold weather crops," Mr. Westland writes, "for some time promised badly for want of moisture; they turned out not so bad after all, and one or two of them were very good. The sugar crop, one of the chief products of the district, from which numbers of people derive subsistence, was, through the coldness of the season, uncommonly good."

20. In Nuddea the crop report is generally favorable, except as regards indigo, which in some places suffered severely from the effects of the cyclone.

* * * * * * * * * *

V.—Public Works and Communications.

23. A great part of the year's programme of road operations was not carried out owing to the reduction in the road fund allotment, which was unavoidable under the financial crisis. The works completed during the year were scarcely of much importance; the best portion of the available funds having been spent in ordinary repairs and the construction of bridges and culverts. In Jessore the metalling of a portion of the road at Singhea, and of two miles of a cross-road near the civil station outside municipal limits, was completed. In Nuddea four and a half miles of road from Kishnaghur to Nuddea were newly metalled, and eleven miles of the metalled road from Kishnaghur to Santipore repaired. Six miles of new unmetalled road from Dadapore to Nowpara, in the Kooshtea sub-division, were also constructed during the year. In the 24-Pergunnahs four miles of metalling were completed on the Takee and Culpee roads, and under the head of "Repairs" sixty-four miles of unmetalled, and six miles of metalled road were put in order.

VI—Arboriculture.

24. The subject has due attention. The amount spent in each district in operations under this head during the past three years is shewn in the margin. The expense is all debited to the district road fund allotment.

Districts.	1867-68. Rs.	1868-69. Rs.	1869-70. Rs.
Jessore ...	900	946	883
Nuddea ...	1,359	849	1,214
24-Pergunnahs	300	547	1,137

VII.—Sanitation.

25. During the year the question of the drainage of the Aknah bheel, in the Barripore sub-division of the 24-Pergunnahs, which was reported in 1868 to be the cause of much fever and cholera in that part of the country, has been finally settled. The zemindars, who will enjoy all the benefit of the proposed improvements, have subscribed Rs. 4,000 towards the cost of the works, and have also agreed to give the land required to be taken up free of all claim to compensation.

* * * * * *

VII*a*.—Water-supply in Nuddea.

27. The importance of securing a sufficient water-supply in Nuddea was not lost sight of in the year of report. The success which attended the damming of certain khals in the district in furtherance of the object, a work undertaken and completed at the expense of Government in the previous year, justified a hope that the zemindars would adopt similar measures at their own cost for the benefit of their tenants; but in this we have been much disappointed. The zemindars with one exception (Baboo Brindabun Sircar) have shown great apathy in the matter, as was reported in this office address to Government in the Public Works Department, No. 49 of 2nd September last, and scarcely any thing further has since been done in this direction.

VIII.—Municipalities.

28. There are six municipalities under Act III. of 1864 in this division, *viz.*, Canning, Calcutta suburbs, Jessore, Kishnaghur, Santipore, and Ranaghat. The Canning Municipality, as is well known to Government, exists but in name; its only permanent source of income being the rent realized from some town lots and cultivated lands in lots 50 and 54, amounting to about Rs. 8,414, the best portion of which is spent in the salaries of the office and

establishment. There has been some improvement lately in the management of the Suburban Municipality; but I have not as yet before me the report of the past year's operations to be able to speak with reference to actual figures. With this municipality the want of sufficient funds is the only obstacle to its proper development. The collections, with reference to the large geographical extent, are too small for the requirements; and much that ought to be done, considering that the municipality comprises the suburbs of a large and populous city, has necessarily to be left undone. During the year a proposition to take over and maintain as imperial roads some of the principal thoroughfares, which, though passing through the suburbs, exist as much for the convenience of Calcutta residents as of the residents of the suburbs, was under the consideration of Government; but it was eventually negatived on financial grounds,—a result much to be regretted. As regards the other municipalities in the division, no special remarks are called for with reference to the conduct of their affairs during the past year.

29. The following gives the estimated income of each municipality for the year 1870-71:—

	Cash balance on 31st March 1870.	*Estimate of calculation for* 1870-71.
	Rs.	Rs.
Kishnaghur	6,518	19,630
Santipore	4,502	14,600
Ranaghat	.....	6,875
Jessore	3,900	11,302
Calcutta suburbs	50,000	3,16,500
Canning	.....	22,404

IX.—Minor Municipalities under Act VI. of 1868.

30. During the year the Towns Improvement Act VI. (B. C.) of 1868 was in force in the towns named in the margin. The Act has not as yet been extended to either of the chowkeedaree unions (Kotechandpore and Kessubpore) under Act XX. of 1856 in the district of Jessore, owing to the villages being too small, and as yet not sufficiently developed; and it remains also to be extended to one or two unions in Nuddea, and the unions under the cantonment magistrate of Dum Dum, in the 24-Pergunnahs. These municipalities are still in their infancy, and it is as yet too early to pronounce a decided opinion on the working of the Act generally. The attempt to develope in our smaller district towns the spirit of municipal self-government is one that cannot but be watched with considerable interest. It may, I hope, be found that these communities will not be wanting in the self-reliance, and, what is perhaps of even more importance, the self-denying spirit without which they cannot hope for success.

24-Pergunnahs.

North Suburban Town.	Joynuggur.
South ditto ditto.	Basirhaut.
Bagjullah.	Takee.
Kadihatty.	Collinga.
Agurparah.	Satkhira.
Nawabgunge.	Kalligunge.
Baraset.	Kullarooa.
Nyehatty.	Debhattah.
Barripore.	Chandooreah.

Nuddea.

Nuddea.	Beernuggur.
Kooshtea.	Moheshpore.
Mehirpore.	

31. The following shews the financial status of each of these minor municipalities:—

Districts.	Names of towns.	Total collections in 1869-70.	Outstanding demand on 3rd March 1870.	Total expenditure in 1869-70.
		Rs.	Rs.	Rs.
24-Pergunnahs ...	North Suburban Town	10,168	5,407	8,757
	South ditto ditto	14,414	13,782	13,687
	Bagjullah	2,192	1,549	1,272
	Kadihatty	1,545	821	1,186
	Agurparah	9,381	1,465	6,616
	Nawabgunge	5,091	366	4,989
	Baraset	2,725	2,063	2,680
	Nyehatty	5,724	3,626	4,914
	Barripore	1,841	73	1,690
	Joynuggur	2,068	131	1,482
	Basirhaut	3,433	571	3,045
	Takee	1,744	104	1,225
	Collinga	4,204	262	3,286
	Satkhera	3,072	804	1,928
	Kalligunge	939	250	927
	Kullarooah	1,283	371	723
	Debhatta	1,178	150	649
	Chandooreah	761	89	809
	Total	71,763	31,884	59,805
Nuddea ...	Nuddea	1,990	2,109	3,468
	Kooshtea	2,771	44	2,462
	Mehirpore	1,943	183	2,416
	Beernuggur	3,094	134	2,455
	Moheshpore	1,257	104	856
	Total	11,055	2,574	11,[illegible]

X.—PUBLIC FEELING.

32. The visit of His Royal Highness the Duke of Edinburgh last December was an occasion of great excitement throughout the division. On all sides there were expressions of loyalty, which were unquestionably sincere, and which may, I think, be accepted as a satisfactory index to the popular mind.

33. I have been in charge of this division for too short a time to write with any degree of personal knowledge regarding the state of public feeling in the interior. All district officers note that the income tax is a source of much grumbling. Averse as the Bengalee is to direct taxation, this is not be wondered at. The tax falls with peculiar severity on the lowest class of assessees, who are chiefly engaged in agriculture; and it is, I am afraid, on this class—to judge from recent cases that have come to notice—that the assessments have been made with the least care.

XI.—EDUCATION.

34. I have as yet had no opportunity of personally inspecting any of the schools in this division, but I give the following extract from the district reports.

35. The Magistrate of 24-Pergunnahs writes:—"During my tour I visited several of the educational institutions. At Baraset the Mission School, once a flourishing institution, has disappeared owing partly to neglect and partly to religious jealousy. A new and entirely secular institution, called after Mr. C. B. Trevor, long Magistrate of the Baraset district, has taken its place and imparts a good elementary instruction. The result of my visits to the different institutions is a general impression affected more or less by local circumstances that education is becoming more valued from year to year."

36. The Magistrate of Jessore reports:—"The sub-divisional officers pay great attention to the subject of education, visiting schools, collecting subscriptions, and in several cases acting as secretaries to the schools.

* * * * * *

Report of operations under the Chota Nagpore Land Revenues' Act.

From COLONEL E. T. DALTON, C.S.I., Commissioner of Chota Nagpore, to RIVERS THOMPSON, ESQ., Officiating Secretary to the Government of Bengal, Revenue Department,—(No. 2075, dated Camp Purulcah, the 27th July 1870.)

No. 3, dated 30th April 1870, with enclosures.

I HAVE the honor to submit in original Baboo Rakhal Dass Haldar's report on his operations as special Commissioner under the Chota Nagpore Land Tenure Act during the 1869-70.

2. The report shews the interest the special Commissioner takes in his work, the difficulties he has had to contend with, and the tact with which he has generally met those difficulties.

5. I have already in my annual report briefly noticed the work completed last year, and the Government have admitted the expediency of employing next season a second special Commissioner. Though in comparison with the extent of the area for enquiry but small progress has as yet been made, I am nevertheless satisfied that much good has been done. It is long since the district has been so quiet during the chief cultivating season as it has been this year.

From BABOO RAKHAL DASS HALDAR, special Commissioner, Chota Nagpore Tenures' Act, to H. L. OLIPHANT, ESQ., C.S., Deputy Commissioner of Lohardugga,—(No. 3, dated Camp Jaria, the 30th April 1870.)

I HAVE the honor to submit the following report of operations under the Chota Nagpore Tenures' Act for the official year ending 31st March 1870.

2. Pergunnah Lodhma was selected for the commencement of the operations, because it was believed that the Bhuinhars there were less excited than in some other parts of the district, their tenures having been registered by the late Lal Loknath Sahi, extra assistant commissioner. The work was accordingly begun in Lodhma on the 1st April 1869. It soon appeared that, whatever the ultimate results might be, the immediate effect of the Land Tenures' Act was an increase to false litigation. In filing their claims the law allowed the Bhuinhars singular facilities,—facilities which in these days are denied even to complainants against certain criminal offences. No mukhtiars were to be propitiated; no court-fees were to be paid in stamps or otherwise, the court itself would supply the necessary paper to the parties; no verification of the claims was required. It was no wonder therefore that when notices were issued under section 3 of the rules supplementary to the Act, they were regarded by the people as so many licenses for registering claims, whether false or true. The court was completely at the mercy of the suitors. It is probable that if the people of Lodhma were alone to be dealt with at the time, there would have been infinitely less vexation and trouble; but the "Agitators" were there—that class of kols, so truthfully described by Colonel Dalton in his various reports to the Government of Bengal. I must do the justice to the Bhuinhars of Lodhma to say, that they did not seem to have taken any active part in the agitation of the Bhuinhari question which was going on for some years past. None of that pergunnah seemed to have gone down to

Calcutta "to state their grievances;" none there seemed to have thought that there was no redress at the hands of the local authorities in Chota Nagpore. But unfortunately I did not come to Lodhma alone; I was accompanied by the men imbued with their "half land" tradition. They nearly one hundred in number, from Sonpur, Basia, Doesa, and Khukhra, encamped near me, held councils, sent emissaries in all directions, and in one week's time I could anticipate the trouble then in store for me. No one can justly blame persons determined by fair means to better their condition; but it was by holding and disseminating doctrines subversive of all good Government: that these people rendered themselves obnoxious. The country belonged to the Mundas; they chose a Hindu king merely as a matter of fancy, and gave to the king elect the worst half of the country for his maintenance, reserving the best half for themselves: they secured the compact in an everlasting manner, by a charter granted by the king and engraved on a copper plate,* which was still in possession of the Bhuinhars; but the charter was of no avail. The Hindus in recent times invaded the best lands and turned them into manjhias. According, however, to the Chota Nagpore Tenures' Act, all manjhias should be registered as Bhuinhari. Such quixotic opinions were openly uttered and propagated. The local authorities were cavilled at, because they would not act upon such opinions because they would not believe that the zemindars were invariably as wicked as they were represented to be. The effect of such notions was manifest in the claims which come to be pouring in. Old obligations were ignored; manjhias lands, hills, jungles and trees, were claimed as part of Bhuinhari. It was demanded, in short, I should make the Bhuinhars quite independent of the zemindars. Where lands were admitted not to be in possession of the claimants, such lands were invariably lost within eight, ten, or twelve years, never beyond the period of limitation fixed by law; as if the zemindars had turned tyrants since the country came to be under administration more vigorous than ever, or as if they were in concert with the local officers for depriving the Bhuinhars of their lands! for otherwise how could the Bhuinhars have lost so much property so recently without any redress? While Government money was at stake, it was painful to have to deal with such claims as have been described above, and, I beg respectfully to add, that I had sometimes to pass through moments of severe trial.

* Proceedings of the Asiatic Society of Bengal, August 1869.

3. Our operations embraced 213 villages during the year under review, namely, sixty-one in Lodhma, forty-nine in Khukhra, eleven in Udoypore, one in Suteambe, one in Belkadi, and ninety in Sonpur. The accompanying tabular statement shews in figures the present condition of the work. Sixty-three villages only have been completed up to the registration of the tenures; in the rest of the villages the work is more or less incomplete.

The Agitators did not remain very long in the special Commissioner's court, and when they left it, many Bhuinhars withdrew from the extravagant claims they had previously filed, and a more moderate tone pervaded all classes concerned.

4. The total number of claims filed was 858, of which 405 have been disposed of, 287 claims had been regularly disputed, 216 such disputes have been settled. There was only one case of review of judgment under section 15 of the Act. Besides, services in thirty-two cases have been commuted to money rent; and twenty-two miscellaneous cases have been cleared off the file.

5. During the year my orders in ten cases had been appealed against; the result of the appeals being shewn below:—

Number of cases appealed against.	Number of cases remanded.	Number of case in which order was modified.	Number of cases in which order was confirmed.	Pending.
10	3	1	5	1

6. In the disposal of claims much time is spent in conferring with the people to try, if possible, the adjustment of the disputes amicably. Up to end of March last, such amicable settlement has been effected in sixty-one cases. Our difficulty arises not only from the fact that more lands are usually claimed than a Bhuinhar is entitled to, but also from the rather frequent uncertainty as to whether a Bhuinhar speaks the truth or otherwise: he has a tendency to prevaricate, often unwillingly, to exaggerate facts, and to give several defferent stories of the same event, if interrogated at different times; hence his very simplicity, allied as it is with stolidness, is apt to mislead, and not unfrequently retards rather than assists our work. * * * * * * * Whatever may be the causes, the Kols, with all their attachment for their Bhuinhari rights, are, at least in recent times, perhaps the most nomadic race in all India. It is by no means the general rule that a Kol is born in a village and grows old there; sometimes he does not learn, or does not remember the name of his own father. In many instances he is found to have been away from a village for many years, perhaps from his infancy, or he may not have been born there at all; yet, as if by intuition, he pretends to know the Bhuinhari lands belonging to his ancestors. I have failed to discover any fixed proportion of Bhuinhari lands in any village. Latterly it has become the fashion among the Bhuinhars of talking about "half" lands, as it is the practice of the zemindars to talk of "half rent and half labor," in reference to Bhuinhari lands; but the word "half" has been found to mean in Chota Nagpore, not one of two equal portions, but *a* portion of a thing only; and the word consequently becomes a fallacious guide. The Kols have indeed their *parhas*, or assemblies, like the primitive people, almost everywhere in Bengal and Orissa. The very existence of the assemblies is likely to lead to the belief that accounts of Bhuinhari rights, in all the villages constituting the *parha* are periodically published there. My experience, however, is that beyond discussing "rice-beer," and some other matters of less moment, no important business is transacted in a *parha*. Under all these circumstances, it often becomes difficult to ascertain the quantity of Bhuinhari lands in a particular village; and to this difficulty must be added the want of trained pleadings in my court.

This only applies to the Oraons the Mundas are not wanderers to any thing like the same extent.

7. I wish I may not be misunderstood. My remarks as to the unreliableness of the Kols do not apply to a considerable number of men whom I have known, and whose acquaintance has greatly encouraged me in the prosecution of the work. Though some of these men have embraced Christianity, such is their moral influence, that they are still on as good terms with their Hindu neighbours as ever.

8. Another fortunate circumstance connected with the disposal of the claims is, that as yet the objections on the part of the zemindars have not been generally very frivolous. I believe this is attributable not so much to the moderation of the zemindars, as to the fact that Lal Loknath Sahi had registered the tenures in the villages which have hitherto come under the operations of the Land Tenures' Act. The Lal's register is usually cited by the zemindars as the sole proof of the extent of Bhuinhari lands in a village.

9. With regard to demarcation we have finished 104 villages during the past official year. When I mention that in these villages 2,006 fields had to be separately demarcated with bearings and distances, and that the ameens have besides prepared sketches of disputed lands in 27 villages containing 1,246 separate fields, I hope the work will not appear small. The demarcation work is attended, as everywhere else, with delays, which arise partly from parties not complying immediately with the orders issued. Fines had to be imposed on 27 persons, zemindars and Bhuinhars. In most cases the consequence was immediate compliance with orders, rendering the realization of fines unnecessary. Rs. 83, however, had to be realized from 8 persons, and the amount has been remitted to the treasury, with the exception of Rs. 5 to be remitted soon.

10. As shewn in the accompanying statement, the tenures in 63 villages have been entered in the register required by section 5 of the Act, and section 14 of the supplementary rules. The tenures have been distinguished agreeably to the preamble and the construction clause of the Act. So far as the Pahmai, Mahtoai, and Mundai, (the last not expressly mentioned in the Act), are invariably found in the holding of the Bhuinhars, they may be classed under the term "Bhuinhari," though they are almost invariably regarded as portions of the rajah's land. The Pahmai, &c., are held respectively by the Pahan, Mahto, and Munda, free of rent, on performance of certain services. The character of these tenures does not differ greatly form the jaghir of the Bhandari, who, however, is generally a Hindu, or who at least professes Hinduism. For the Pahmai, which is another name for the Dalikatari and the Panibhara lands, the Pahan has to make offerings to Jáyár-Budi, the tutelary deity of a village, and to make arrangement for the supply of water during festivals. The Pahmai not unoften includes certain kinds of Bhutkheta, the produce of which is appropriated to the *puja* of the spirits called Darha and Desáuli. The largest quantity of Pahmai lands met with in a village (in Lodhma) was 13½ beegahs. For the Mahtoai, the Mahto has to collect rents from the ryots and to render accounts of the same to the landlord; to allot lands to ryots settling in the village; and to act, in short, as a Patwari. The Mahtoai seldom exceeded 7½ beegahs. For the Mundai, the Munda has to attend on the landlord; to supply provisions to peons deputed by the maharaja; to realize talabana from the ryots, &c. The Mundai was rarely more than 2½ beegahs in a village in Lodhma. In the north, north-west, and western parts of the district, where the Oraon population prevails, the Mahto and the Pahan are the village officers oftener met with than a Munda. In the south-east and eastern parts of Chota Nagpore, the Munda and the Pahan are usually found. The Mahto is rare. In practice, the duties of the Mahto and the Munda did not appear to me to differ materially; and in some places where there is neither Munda nor Mahto, the Pahan performs all the village duties required by the landlord. The office of Pahan seems to be an universal institution in these parts. The Pahan of Chota Nagpore is the Naya of Manbhoom, and the Barya of Palamow and the countries immediately to the north, west, and south of it. The landlord of a village can resume the Pahmai lands only in the case of the entire population of the village ceasing to believe in the Bhuts, but he can resume the Mahtoai and Mundai lands in the event of the Mahto and Munda systematically neglecting their duties. Since the operations commenced under the Land Tenures' Act, a number of Mundas and Mahtos have thrown up their service lands in order to be relieved of their duties.

11. Whatever may have been the original village system in Chota Nagpore, it owed its present form at least to the Hindus. The names of all the village officers—Munda, Mahto, Pahan, Bhandari, &c., are derived from the Sanscrit;* the proprietory rights of the maharaja are, and of his Hindu delegates have, at least sometime since, been begun to be fully acknowledged, and the Mundas, Mahtos, and Pahans, have occupied an altogether subordinate position in the system.

12. The above descriptions of tenures are different from the Bhuinhari proper, of which we have the Munda, Mahto, and Pahan, "khunts." A khunt may mean a generation, a family, or anything. I do not pretend to understand the distinction between these several khunts. I doubt whether this distinction of khunts existed when the Mundas were left alone. The probability is, that the Hindu landlords have induced the Kol Bhuinhars thus to split themselves into "khunts," so that the chances might be greater for a khunt becoming extinguished for want of an heir, and the lands belonging to it being easily turned into 'rajhas.' We have occasionally heard of a fourth kind of khunt, called Panibhara; and on one occasion of a Manki khunt.

13. Though it is probable that originally the Bhuinhari lands bore no rent, it has been customary I believe to levy small quit-rents in some places several years since, even before the country came into the hand of

* It is curious that some of the Mundari words are in the primitive form of the Sanscrit language.

But as the privileges were all accorded to persons professing the ancient religion of the country, not to Hindu priests or for the worship of Hindu gods, it is obvious that the system was ante-Aryan, though upheld under Aryan terms.

E. T. D.

From a very remote period the Oraons appear to have had a priesthood that was, to a certain extent, hereditary. At least the power which they pretended they could exercise over the world of spirits, and through them over the elements, was supposed to be confined to particular families. When an Oraon patriarch determined on making a new settlement, he associated himself with one of the priestly line, who thus became his partner and shareholder. The respective shares of the patriarch and the priest in all probability originated the powerful khunts.

E. T. D.

the British Government. The only service Bhuinhars were originally bound to render the maharaja appears to have been to attend on him as guardsmen on marriages and other extraordinary occasions. In these respects the Bhuinhari tenure resembles pretty nearly the Ghatwali tenures in Manbhum. The only perceptible difference being, that the Ghatwals (more properly speaking the Sadials) do not claim their lands, as having been "reclaimed" by their ancestors. My belief is, both the Bhuinhari and Ghatwali tenures were precisely of the same nature. When the feudal proprietors, the jagirdars, and muqraridars, came into existence—and that must have been long ago—they began to take such services from the Bhuinhars as were most advantageous to themselves. Though the Kol converts to Christianity generally ignore the services, they are long customary; and unless they are commuted to money rent, the zemindars have every right of prescription to claim them.

The Ghatwals most decidedly do make this claim in all cases where there has been no break in the line of descent.

14. There are Bhutkheta lands in some villages (not exactly those mentioned before) which are regarded as part of Bhuinhari. These tenures are not necessarily in the holding of the Pahan, they may be held by Mundas and Mahtos also. The produce of such Bhutkheta is dedicated to the propitiation of the *manes*, or some unusual spirits which cannot be classed with the guardian deities of a village. Such Bhutkheta fields, if existing from ancient times, are always rent-free; but where a field has been turned into Bhutkheta after the imposition of rent on the Bhuinhari tenures in the village, a quit-rent is paid for it.

15. In the village register of the tenures I have made an attempt to define clearly the rights of the Bhuinhars. I have held, with the approval of Colonel Dalton, that the Bhuinhars have hereditary and transferable interest in the Bhuinhari lands, which the landlord can resume only in execution of a decree or order of a competent court. This is in opposition to the usual practice of resuming a Bhuinhar's lands, when he leaves a village, with the usual theory of giving him back the same on his return, and is consequently considered exceptionable by the zemindars. They will not see that the object of the Land Tenures' Act is to better the condition of the Bhuinhars, without infringing upon just proprietory rights; but it is impossible to effect this without violating, in some measure, the proprietor's feelings. Does the proprietor usually fulfil his part of the tacit engagement of restoring a Bhuinhar's lands on his or his heir's return? Is it not notorious that he can plead his custom to the contrary. In Bengal, certain landlords unjustifiably exact a fourth part called "chauth" of the sale proceeds of trees, which the perpetual tenant or the free holder may have planted and reared. Would any court in Bengal uphold such a custom? It would be a pity to deny to the Bhuinhar a right which is enjoyed by an ordinary muqararidar. It was suggested to me by one representing zemindari interest, that it might be ruled whenever a Bhuinhar is desirous of disposing of his landed property, he should in the first instance offer the same to the proprietor at a valuation of 20 years' purchase; and if the proprietor refuse to take up the land at that price, the Bhuinhar would be at liberty to sell his land to any highest bidder. The substance of the zemindar's objection it is not difficult to guess. If a Bhuinhar's property passes into the hands of an outsider, it may not be easy to exact the various services of which the landlords avail themselves. As regards the services, I fain hope that it will not be long, before they are generally commuted to money rent; so that there will be no difference between Bhuinhari and free holds, and the proprietor's demand will be confined to the rent alone. The effect of the enunciation of the Bhuinhar's rights will be a sense of security, which will probably make him even more attached to his lands, and transfers are by no means likely to be more frequent than before.

16. It has not been deemed necessary to define in the registers *all* the rights a Bhuinhar might enjoy. But as the registration of the tenures has very naturally irritated the zemindars, and as the Bhuinhars are likely to be harassed in a variety of ways, I beg to allude briefly to a few other topics which frequently form the subject of my conferences with the Bhuinhars and the landlords.

17. The Bhuinhars may and do hold rajhas lands, but the landlords are said to threaten them with enhancements of their rents, or sequestration of their fields.

18. Claims have been made by the Bhuinhars for exclusive right to hills and jungles. Such claims have appeared to me to be simply monstrous. The proprietor of the village alone can have proprietory rights in hills and jungles. But on the other hand, I have given it out that the Bhuinhars cannot be denied the prescriptive right of using timber and fuel obtained from jungles in their villages for domestic purposes. They cannot sell timber on their own account.

19. With regard to trees planted on rajhas lands, Colonel Dalton has ruled that wherever the Bhuinhars have reared such trees, they must have done so in their capacity as ryots, not as Bhuinhars; and that their rights in such trees would be in no way connected with their Bhuinhari rights and titles. I have pointed out to the zemindars that the object of the new law was not to take an inventory of all property, or to record all the rights belonging to a Bhuinhar, and it would not therefore be understood in any court that the Bhuinhars had no more than what has been registered by the special Commissioner.

20. The question of *taur*, or high lands, to which a Bhuinhar is entitled, is of more importance. Lal Loknath Sahi did not consider such lands to be Bhuinhari. His principle was absolute, namely, that no extraordinary labor was needed to reclaim the high lands, and that therefore they could not be allowed to be held upon the same advantageous terms as low lands. On the other hand, many Bhuinhars have claimed all the *taur* lands in their holdings as their Bhuinhari. In determining this question, I have been guided by facts. I found in some villages that *taurs* had been claimed and held from former times as Bhuinhari; their quantity did not bear any proportion to the quantity of low lands held, but they have been held always without payment of any rent or cess. Certain decisions of the late Sadr Diwani Adalat shew that claim to *taur* lands as Bhuinhari have been upheld at least fifty years ago. This is the case certainly in some villages in pergunnahs Khukhra and Udoypore. In other places, as far as my enquiries have extended, in pergunnah Lodhma and Sonpur, it was found that Bhuinhars held their *taur* lands as rajahs, for they could not be distinguished inany way from the high lands held by the ordinary ryots. Both are equally subject to cesses called

Hartaki, Beheri, or Taur-pancha, more than twenty years before the passing of the Land Tenures' Act; or where the cesses are not customary, both are equally exempt from them. It is also worthy of remark that where the *taurs* are not regarded as Bhuinhari, the same *taurs* are not held always by the same tenants. They cultivate wherever they like. It may further be stated that Bhuinhars of Sonpur have brought suits in civil courts about their Bhuinhari more than twenty years ago, yet they have not claimed *taurs* as Bhuinhari In my court some Bhuinhars did not claim such lands, as they did not consider them to be Bhuinhari. Others voluntarily withdrew their claims to the high lands. Where these lands were held as rajhas, I adopted the principle of attaching a certain quantity of *taur* to a certain quantity of low rice land. I subsequently found that Colonel Davies, Judicial Commissioner of Chota Nagpore, had previously adopted and acted upon the same equitable principle.

21. I had convened a meeting of the Bhuinhars and zemindars for the purpose of considering what quantity of dry cultivation lands might be fairly decreed with a particular quantity of Bhuinhari low land. The proceedings had been reported in my diary for December last. I proposed the following scale:—

For a Bhuinhar holding 4 *pawas* of wet land or less ...	6 *kats* of dry land per each pawa of wet land		
For a Bhuinhar holding more than 4 *pawas* of wet land up to 16 *pawas*	4 *kats*	ditto	ditto.
For a Bhuinhar holding more than 16 *pawas*	3 *kats*	ditto	ditto.

The zemindars proposed a scale less favorable to the Bhuinhars, while the latter proposed a very extravagant one. The zemindars, however, finally expressed their willingness to accept the scale proposed by me, and the Commissioner has also signified his approval of that scale.

22. The Bhuinhars say that if I decree to them only a portion of dry cultivation lands held by them, the landlords might force them to confine their cultivation within those particular *taurs*. The apprehension is childish; at least they should not give way to such apprehensions, while redress can be had in the courts of justice in the district. Are we to register all rajhas lands held by Bhuinhars, because if we register the Bhuinhari alone, such rajhas lands might be sequestered by the zemindars? That is not the object of the law: we decree a quantity of rajahs dry cultivation with low lands free of rent; but we certainly do not thereby permit the landlords to deprive the Bhuinhars of the rest of their *taurs*.

23. Closely connected with the question of dry cultivation lands is the *korkar*, or land recently reclaimed. In determining whether such lands can be registered, I proceed upon the principle; if it is satisfactorily proved that the *taur* or waste land which has been turned into *dou* by the Bhuinhar's labor was originally held as Bhuinhari (which can only very rarely be the case) the land is registered, otherwise the claim to *korkar* is rejected.

24. There are tenures in Chota Nagpore similar to the Bhuinhari, and called *Bahbila and Aridot* They have been reclaimed by people other than the Kols. I did not consider that such lands were within the scope of the Land Tenures' Act, and accordingly rejected the claims.

25. It is true that if all such lands, in short all the lands in Chota Nagpore. Bhuinhari, Manjhias, and Rajhas, had been comprehended in the Act, the law would have proved itself a far greater boon to the country than it can now possibly be. Colonel Dalton had recommended that rajhas as well as the other lands should be registered, but was subsequently induced by financial considerations to consent to the exclusion of the rajhas from the bill.

Not exactly. To include the rajhas which an ordinary rent-paying land would have been too great an interference with the proprietor.

26. The Bhuinhars claimed, in not a few instances Manjhias tenures as their Bhuinhari. Like the *man* lands in Maunbhoom, the Manjhias is almost always about the best land in the village. Some of the Manjhias was doubtless originaly Bhuinhari, but in most cases the Bhuinhari right has been extinguished in them by lapse of time. It is worthy of remark that the claims to Manjhias lands filed by the landlords have not been generally objected to by either Bhuinhars or ryots.

27. The Betkheta tenures have been claimed and demarcated in almost all the villages shewn under columns 16 and 17 of the accompanying statement. Latterly the ryots have shewn an inclination to give up the tenure in order to be exempted from the services. But the zemindars have also set their wits to work. They say that the ryots have to render the services because they cultivate *taur* lands; for which they in many places do not pay rent either in money or in kind. If this had been the case, there would have been no Bethkheta, which is known in all Nagpore to be held by ryots exclusively for rendering certain services to the landlord. The Bethkheta is likely to be given up in most villages.

28. In the registers we have entered the reputed quantities of lands, besides the areas in beegahs. In Lodhmah, Khukhra, Udoypore, and some other parganas, low rice lands are divided into *pawas, kanwas, &c.*; the high lands are known by "kats;" *i.e.*, by the quantity of seed that can be sown in the land. In Sonpur and the southerly parganas all sorts of lands are known by *kats*. The following is the land measure.—

1 Kani		
2 Kanis	=	1 Kanwa
2 Kanwas	=	1 Pawa
4 Pawas	=	1 Khari
8 Kharis	=	1 Bhari

a kani is probably equal to 1 *kat* or land in which 1 kat of seed can be sown. A *kat* is a *maund* or 40 *poilas*, each *poila* consisting of 12 *gandis*, or 48 tolahs weight, and the *kat* therefore weighs 25 bazar seers. In Belkandi, and perhaps elsewere, the *pawa* consists of 4 *kanwas*. Nothing can be more inaccurate than the land measure of Chota Nagpore. If it originated with the Hindus

(as the names of divisions imply) the object was evidently to defraud the simple ryots. By actual measurement we find that a *pawa* may consist of 1½ or 9 beegahs; a *kat* may contain 1 or 4½ beegahs.

29. As regards the rents payable by the Bhuinhars, I have fixed the same as the earliest known amounts within 20 years before the passing of the Land Tenures' Act whenever it was practicable to ascertain the same. We hear of "rates of rent," but from uncertainty in the land measure rates cannot exist. Rent is occasionally fixed amicably between the landlord and the ryot, but the difference in the qualities of the lands is not in many places taken into account. In this respect, as I was informed in Sonpur, the proverb is applicable to the country, "all sorts of rice are sold 22 *paseries* for the rupee (*Sab dhan bais paseri.*)

30. In regard to "Bet-begar," or forced labor, though Lal Loknath Sahi recorded an indefinitely large amount of services for all villages alike, it was not found to be consistent with facts. I have found the following to be most general :—

3 days ploughing with 1 plough,
3 „ digging with 1 kudal,
3 „ sowing or planting rice by one man,
3 „ cutting rice by one man,
1 day thrashing corn by one man,
1 „ assisting in the making of a granary,
Supplying 100 bundles of straw or grass,
Ditto a load of bamboo,
Ditto two small timbers,

and carying landlord's burthen in his journeys. In some villages only one day's planting or cutting rice is due, in some 60 or 200 bundles of grass are supplied, and so on; but in my experience the actual scale only rarely equalled that recorded by Lal Loknath. The condition of carrying landlords' burthen was liable to great abuse. Though certain Bhuinhars are extremly reluctant to admit this condition, the fact is notorious. I have heard of Bhuinhars accompanying their landlords to distant countries, with burthens, and never again returning to their homes, having in all probability died on the way. I have limited the service to fifteen days in the case of Bhuinhars, and to seven days in the case of ryots generally, though in some cases equitable considerations induced me to adjudge longer periods in some villages of Lodhma, never exceeding one month.

31. Since the commencement of the operations in April 1869 I continually exhorted the people to apply for commutation of their services. Special notices were issued to the Bhuinhars for securing this object, but still during a period of ten months and a half only twenty-four applications had been received. People seemed to doubt the perfect legality of such a proceeding, or they were afraid their rents might be too greatly enhanced. Since, however, the Commissioner's visit to Sonpur in February last, the Bhuinhars have awakened to the benefit promised them by the law, and twenty-six applications for commutation of services have been filed in one month and a half. The rent in lieu of services has rarely exceeded Rs. 2 in any case. It is probable that henceforth considerable business will have to be done under section 9 of the Act.

32. The work of pargunch Lodhma having already been finished, I beg to show, in the following table, the result of our operations as compared with the work of Lal Loknath Sahi. There can be no doubt that the extra assistant commissioner had done his duty most conscientiously; the present more favorable result is attributable solely to the provisions of the Land Tenures' Act. Pargana Lodhma contains (without meaning to speak precisely) 1,37,750 beegahs of lands; out of this 7,032 beegahs, or in common local phraseology 769 *pawas* wet lands and 1,560 *kats* high lands have been decreed and registered as Bhuinhari; the quantity claimed having been 891 *pawas dou* and 5,754 *kats taur*.

Bhuinhari lands registered					Bhuinhari rent registered.	
By Lal Loknath Sahi.		*By special Commissioner, C. N. T. Act.*			*By Lal Loknath Sahi.*	*By special Commissioner, C. N. T. Act.*
Wet land in *pawas.*	Beegahs.	Wet land in *pawas.*	Up land in *kats.*	Beegahs	Rs. As. P.	Rs. As. P
659	2,864	769	1,560	7,032	661 4 6	817 8 10

The increased quantity of land registered by me does not include lands proved in the civil courts as rajhas since Lal Loknath Sahi's registration; the increased rent is owing partly to increased quantities of lands now recognized as Bhuinhari, and partly also to commutation of services to money rent. The table does not contain Mahtoai or Mundai lands (13 *pawas* or 59 beegahs registered by me) as there was no means of comparison, the Lal not having given the areas of those lands.

33. In Lodhma 306 *pawas dou* and 735 *kat taur* had been claimed as manjhias; 264 *pawa dou*, and 492 *kat taur* (2,079 beegahs) having been demarcated. The quantity of Bethkheta fields claimed and decreed were 56 *pawas*, or 227 beegahs.

Memorandum from the Deputy Commissioner of Ranchi,—(No. 1020, dated the 13th May 1870.)
FORWARDED in original to the Commissioner of Chota Nagpore.

Statement shewing amount of work done in the office of the Special Commissioner under Chota Nagpore Tenures' Act, during the year ending 31st March 1870.

Claims ...	Registered ...	858
	Disposed of...	4[illegible]3
	Pending ...	453
Disputes ...	Registered ...	287
	Disposed of...	216
	Pending ...	71
Commutation of service cases...	Registered ...	50
	Disposed of...	32
	Pending ...	18
Cases or reviews of jugdment ...	Registered ..	1
	Disposed of...	1
	Pending ...	0
Miscellaneous cases.	Registered ...	26
	Disposed of	22
	Pending ...	4
Number of villages.	Done up to registration ...	63
	Done up to demarcation and preparation of maps ...	41
	In which demarcation is half finished ...	4
	In which the tenures are ready for demarcation ...	38
	From which claims have been registered, but disputes not yet disposd of ...	67
	Total number of villages ...	213

REMARKS.

Villages done up to registration. Pergunnah Lodhma.—Ata, Banda, Bandu, Balcara, Bankuli, Belangi, Belsiring, Barango Changatola, Chandapara Chalagi, Chitr, Chicaro, Darangkel, Dungra, Dun-du, Dandaul, Dundugra, Gulo, Ghagra, Guni, Galalong, Gabondor, Hakkajang, Hasla, Hesag, Huringdag, Jaria, Kaursili, Kenke, Kulbutu, Katamkuku, Kanchanpur, Kedli, Lodhma, Lohagara, Loagain, Lupunga, Murhi, Murhu, Mutpa, Padampur, Patratoli, Pukukachabari, Puro, Pandra, Phudi, Rappa, Rai, Rouhe, Ranidih, Silapat, Singhpur, Sarambel, Sarnadag, Sirka, Saura, Silda, Tumna, Tiga, Torar. *Pergunnah Khukhra*—Champi, Khambha.

Villages done up to demarcation.—Pergunnah Khukhra—Bargain, Buti, Bhita, Harmu, Khijuri, Loadih, Nemkom, Samlong.—*Pergunnah Udaypore.*—Garsul, Konka. *Pergunnah Sonpur.*—Bingaon, Chur, Charuedag, Chaldandu, Chirubatu, Dari, Digadon, Dumardoga, Erabutu, Gutjora, Ghasibari, Goso, Ganaloya, Hutar, Ithetola, Juljula, Kaparia, Khijuri, Kudlong, Kasira, Maubo, Paurgaon, Patramachua, Rouhe, Rewa, Siladon, Sonmer, Sodag, Tapisera, Timgaon, Tuin.

Villages in which demarcation is half finished.—Pergunnah Sonpur.—Amjhora, Chhata, Harubappa, Machia.

Villages ready for demarcation. Pergunnah Khukhra.—Baragain, Bariatu, Chutia, Chouri, Gutua, Gari, Hehal, Hesal, Morhabadi, Purdag, Ranchi, Tiril. *Pergunnah Udaypore.*—Pawatoli. *Pergunnah Sonpur.*—Bichagara, Bagra, Beluadog, Belahati, Dahu, gutu, Datia, Dehkela, Idri, Jone, Jorko, Jamnadag, Jaltanda Gamaria, Khunti, Kunjela, Malgo, Meha, Mismano, Orekel, Pandu-Rolagutu, Runju, Roro, Samundur, Sungi, Saranghria.

CAMP JARIA,
The 30th April 1870.

RAKHAL DASS HALDAR,
Special Commissioner C. N. T. Act.

From H. S. BEADON, ESQ., Officiating Under-Secretary to the Government of Bengal, to the Commissioner of Chota Nagpore,—(No. 3417, dated Fort William, the 29th August 1870.)

I AM directed to acknowledge the receipt of your letter No. 2075 dated the 27th ultimo, together with its enclosure.

2. The Lieutenant-Governor fully appreciates the interest and industry displayed by Baboo Rakhal Das Haldar in carrying out the provisions of the Chota Nagpore Land Tenure Act during the years 1869-70. The progress of the work though slow has been satisfactory, and the Lieutenant-Governor is especially glad to find that the operation of the Act has been so beneficial in its results.

3. With regard to the first part of paragraph 3 of your letter, I am to add that an application has been made to the Government of India for a second special commissioner to be employed from the commencement of next cold season.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY MAIN LINE.

Approximate Return of Traffic for week ended 20th August 1870 on 1,131½ miles open.

	Coaching Traffic.			Merchandise and Mineral Traffic.			Total Traffic Receipts.
	Number of Passengers.	Coaching Receipts.		Weight carried.	Receipts.		
		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£. s. d.
Total Traffic for the week	79,939½	1,02,642 9 2	9,408 18 1	433,457 10	*3,25,919 5 4	29,875 14 9	39,284 16 10
Or per mile of Railway	.....	90 11 5	8 6 4	.....	288 0 8	26 8 1	34 14 5
For previous 6 weeks of half-year	559,398	6,98,864 6 2	64,062 11 4	3,165,469 10	21,77,274 15 0	199,583 10 9	263,646 2 1
Total for 7 weeks ...	639,337½	8,01,506 15 4	73,471 9 5	3,603,926 20	25,03,194 4 4	229,459 9 6	302,930 18 11
Comparison.							
Total for corresponding week of previous year	85,107½	1,07,606 6 4	9,863 18 5	495,660 20	2,88,251 6 7	26,423 0 11	36,286 16 4
Per mile of Railway corresponding week of previous year ...	.....	95 2 3	8 14 5	.....	254 13 10	23 7 3	32 1 8
Total to corresponding date of previous year	673,000½	8,31,701 15 2	76,247 11 10	3,743,787 30	21,16,123 4 10	193,977 19 5	270,225 11 3

* Rs. 4,439-1-0 added on account of freight of locomotive coal carried on Jubbulpore line.

EAST INDIAN RAILWAY JUBBULPORE LINE.

Approximate Return of Traffic for week ended 20th August 1870 on 223 miles open.

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	2,797	7,163 9 4	656 13 3	13,863 0	4,634 15 3	424 17 5	1,081 10 8
Or per mile of Railway	.....	32 2 6	2 18 11	.....	20 12 6	1 18 1	4 17 0
For previous 6 weeks of half-year	21,019½	54,799 14 5	5,023 6 5	119,852 20	39,857 4 8	3,653 11 9	8,676 18 2
Total for 7 weeks ...	23,816½	61,963 7 9	5,679 19 8	133,655 20	44,492 3 11	4,078 9 2	9,758 8 10
Comparison.							
Total for corresponding week of previous year	3,143½	6,055 1 2	555 1 6	42,750 30	8,183 8 5	750 3 1	1,305 4 1
Per mile of Railway corresponding week of previous year ...	.....	27 2 5	2 9 10	.....	36 11 2	3 7 3	5 17 1
Total to corresponding date of previous year	21,117½	47,189 0 11	4,325 13 3	260,035 20	57,493 2 8	5,270 4 0	9,595 17 3

EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for Week ended 20th August 1870 on 113¼ miles open.

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	20,698	11,557 2 9	1,059 8 2	137,275 12	32,302 3 3	2,961 0 8	4,020 8 10
Or per mile of Railway	183	102 0 10	9 7 1	1,212 0	285 3 8	26 2 11	35 10 0
For previous 7 weeks of half-year	129,661	68,117 6 0	6,244 1 10	436,919 24	76,877 9 4½	7,047 2 3	13,291 4 1
Total for 8 weeks ...	150,359	79,674 8 9	7,303 10 0	574,194 36	109,179 12 7½	10,008 2 11	17,311 12 11
Comparison.							
Total for corresponding week of previous year	22,081½	11,326 2 9¾	1,038 4 8	104,872 30½	27,137 12 0	2,487 12 6	3,525 17 2
Per mile of Railway corresponding week of previous year ...	195	100 0 2	9 3 4	926 0	239 10 0	21 19 4	31 2 8
Total to corresponding date of previous year	179,084½	99,878 6 5¾	9,155 10 5	718,115 36¾	142,245 10 8	13,039 3 8	22,194 14 1

CALCUTTA AND SOUTH-EASTERN STATE RAILWAY.

Approximate Return of Traffic for Week ended 20th August 1870 on 28 miles open.

		Rs. As. P.	£ s. d.	Mds. Srs	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	4,163	700 9 9	70 1 2	7,842 18	218 8 6	21 19 1	92 0 3
Or per mile of Railway	149	25 0 4	2 10 1	262 0	7 13 5	0 15 8	3 5 9
For previous 20 weeks of half-year	110,784	18,885 11 3	1,888 11 5	205,489 22	7,180 13 3	718 1 8	2,606 13 1
Total for 21 weeks ...	114,947	19,586 5 0	1,958 12 7	212,823 0	7,400 5 9	740 0 9	2,698 13 4
Comparison.							
Total for corresponding week of previous year	4,163½	791 6 0	72 10 10	7,855 0	245 12 6	22 10 7	95 1 5
Per mile of Railway corresponding week of previous year ...	149	28 4 0	2 11 10	281 0	8 13 5	0 16 1	3 7 11
Total to corresponding date of previous year	99,434	18,957 10 0½	1,737 15 6	224,511 9	15,234 15 9	1,396 10 9	3,134 6 3

Meteorological Telegraphic Report for the period 21st to 27th Aug. 1870.

Stations.	Date.	Hour.	Barometer reduced to 32°.	Barometer reduced to sea-level.	Thermometer. Dry.	Thermometer. Wet.	Humidity Sat. =100.	Wind. Direction.	Wind. Velocity.	Rain.	Weather initials.	Clouds.
	Aug.				⊖	⦶				Inches.		
Calcutta.	21st	10	29·597	29·615	83·0	80·8	91	S	...	...	Scuds from S	S
		16	29·491	29·509	82·0	80·4	93	S	...	...	...	S
	22nd	10	29·592	29·610	81·0	80·2	95	S S W	...	0·28	*o, d*	
		16	29·496	29·514	85·0	81·0	83	S S W	...	...	...	S, CS
	23rd	10	29·603	29·621	81·0	78·5	88	S W	...	0·04	...	S
		16	29·492	29·510	84·0	79·3	81	S W	...	0·01	...	K
	24th	10	29·648	29·666	78·4	77·5	95	S S W	...	...	*o, r*	
		16	29·558	29·576	78·7	77·7	95	S S W	...	0·11	*o, d*	
	25th	10	29·669	29·687	79·3	78·8	97	S S E	...	...	*o, r*	
		16	29·581	29·599	79·5	78·6	97	S by E	...	0·85	*o*	
	26th	10	29·678	29·696	83·2	80·6	91	S by E	...	...	...	K, C
		16	29·559	29·577	85·7	80·8	79	S S E	...	0·06	...	K, C
	27th	10	29·678	29·696	84·0	80·0	83	S S E	...	...	...	C, K
		16	29·569	29·587	85·4	80·0	77	S by E	...	0·05	...	C, K
Saugor Island.	21st	10	29·604	29·610	85	83	91	W	2	...	*p, o, u*	N
		16	29·504	29·510	85	82	87	S W	2	0·10	*o, p, v*	N
	22nd	10	29·606	29·612	83	82	95	W	...	0·70	*d, o, p*	N
		16	29·516	29·522	86	83	87	W	1	...	*o*	N
	23rd	10	29·626	29·632	82	79	87	W	2	1·40	*o, p, v*	N
		16	29·541	29·547	81	80	95	W N W	2	0·10	*o, v*	N
	24th	10	29·681	29·687	80	79	95	W N W	3	0·40	*d, o*	N
		16	29·589	29·595	82	79	87	W	3	0·10	*o, v*	N
	25th	10	29·678	29·684	84	80	83	W	2	...	*o*	N
		16	29·586	29·592	84	82	91	S W	1	...	*o, u*	N
	26th	10	29·670	29·676	83	81	91	W S W	...	0·90	*o, v, u*	C, N
		16	29·563	29·569	82	79	87	N N E	...	0·20	*o, v, u*	N
	27th	10	29·676	29·682	84	81	87	S W	1	...	*b*	N
		16	29·573	29·579	86	80	75	S W	1	...	*b*	N
Chittagong.	21st	10	29·620	29·731	81	79	91	S E	6·5*	0·40	*p, u, g*	KS
		16	29·498	29·607	82	78	82	S	13·1*	...	*d, u, m*	N
	22nd	10	29·553	29·662	87	81	76	S	8·2*	0·80	...	
		16	29·528	29·638	82	79	87	S S E	11·7*	...	*b*	K, KS, CS
	23rd	10	29·620	29·731	80	76	82	S W	7·2*	0·60	*p*	K, KS
		16	29·508	29·618	83	79	83	S S W	15·9*	...	*b*	K, CK, C, KS
	24th	10	29·625	29·734	86	81	83	S E	8·5*	0·50	*v*	K, KS
		16	29·518	29·628	83	79	83	S W	13·3*	0·10	*b, v*	K, KS
	25th	10	29·647	29·756	87	80	72	W by S	5·6*	0·50	*b, v*	CK, K
		16	29·545	29·654	86	80	75	W	15·7*	...	*b, v*	C, CK
	26th	10	29·635	29·744	86	80	75	S W	7·0*	...	*b*	K, KS
		16	29·497	29·605	87	81	76	S	7.9*	0·30	*b, v*	K, KS
	27th	10	29·598	29·708	83	79	83	N E	4·6*	...	*m*	KS
		16	29·525	29·636	84	80	83	E N E	5·0*	...	*u*	KS, N
Madras.	20th	10	29·812	29·842	84	74	60	W by S	11*	...	*b c*	
		16	29·675	29·705	89	75	49	N W by W	8*	...	*b c*	
	21st	10	29·798	29·828	87	75	55	W	11*	...	*b c*	
		16	29·686	29·716	86	76	61	E N E	4*	...	*b c*	
	22nd	10	29·826	29·856	89	77	56	W	9*	...	*b c*	
		16	29·695	29·725	89	80	66	E N E	8*	...	*b c*	
	23rd	10	29·831	29·861	89	77	56	W	5*	...	*b c*	
		16	29·703	29·733	87	78	65	E	9*	...	*b c*	
	24th	10	29·845	29·875	88	77	58	W S W	8*	...	*b c*	
		16	29·723	29·753	88	78	62	E	6*	...	*b c*	
	25th	10	29·834	29·864	89	78	59	W	8*	...	*b c*	
		16	29·692	29·722	89	79	62	E by N	10*	...	*b c*	
	26th	10	29·760	29·790	89	76	86	N W	9*	...	*b c*	
		16	29·663	29·693	86	77	64	E by S	9*	...	*b c*	
Cuttack.	20th	10	29·663	29·685	86	82	83	W	10*	...	*d*	KS, N
		16	29·480	29·562	87	82	79	S	1*	...	...	KS, N
	21st	10	29·573	29·655	85	82	87	W	...	0·30	*r, d*	KS, N
		16	29·500	29·582	86	83	87	S	...	...	*d*	KS, N
	22nd	10	29·652	29·734	85	79	75	W S W	2*	...	...	C
		16	29·517	29·599	87	81	76	S W	3*	...	...	K, KS
	23rd	10	29·647	29·729	84	79	79	W	7*	0·10	*t, r*	CS
		16	29·587	29·669	84	78	75	S W	4·5*	...	...	N
	24th	10	29·665	29·747	85	80	79	S S W	1*	0·10	*b, d*	CS
		16	29·585	29·667	83	79	83	N W	9*	...	*b*	S
	25th	10	29·665	29·747	86	81	79	S W	3*	0·10	*b*	KS
		16	29·577	29·659	87	82	79	S S W	2*	...	*u*	N
	26th	10	29·675	29·757	85	81	84	S	1*	0·50	*r, d*	KS, S
		16	29·608	29·690	83	79	84	S S W	2*	...	*b, t*	KS
Akyab.	21st	10	29·767	29·782	78	76	90	E	1	4·70	*r*	
		16	29·632	29·647	80	78	91	S E	1	0·30	*g*	N
	22nd	10	29·782	29·797	80	77	86	S E	1	1·80	*o*	KS
		16	29·632	29·647	80	78	91	S	1	1·00	*g*	KS
	23rd	10	29·792	29·807	76	74	90	N	...	4·30	*r*	
		16	29·637	29·652	78	76	90	S E	1	0·40	*g*	KS, N
	24th	10	29·772	29·787	80	78	91	E	...	0·20	*o, r*	N
		16	29·734	29·744	79	77	90	S W	...	0·30	*b*	C, CS
	25th	10	29·792	29·807	80	77	86	S E	1	0·30	*g*	K, KS
		16	29·697	29·712	82	78	82	S	1	0·10	*b*	C, KS
	26th	10	29·759	29·774	81	77	82	S E	1	0·50	*g*	CS, KS, N
		16	29·657	29·672	82	78	82	S	1	0·20	*b*	C, K
	27th	10	29·734	29·749	79	76	86	S E	1	1·50	*g*	K, CS, KS
		16	29·662	29·677	80	76	82	S	1	...	*g*	CS, KS

Velocity of wind in miles per hour.

CALCUTTA,
The 27th August 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Govt. of Bengal.

Weekly Report of Rainfall compiled at the Meteorological Reporter's Office.

Circuit.	Stations.	Rainfall from 8th to 14th August 1870.	Rainfall from 15th to 21st August 1870.	Rain from 1st January 1870. Rain.	Rain from 1st January 1870. Up to date.	Remarks.
		Inch.	Inch.	Inch.		
South-Western.	Pooree	Not received	Not received	12·26	7th Aug. 1870.	
	False Point	ditto	ditto	22·65	ditto.	
	Cuttack { Telegraph Office ...	Nil	6·20	28·20	21st Aug. 1870.	
	Cuttack { Jail... ...	0·10	5·40	27·08	ditto.	
	Sumbulpore	2·64	Not received	30·72	14th Aug. 1870...	Not received 18th to 24th July, and 1st to 7th August.
	Balasore	0·50	ditto	22·74	ditto.	
	Bhuddruck	0·02	ditto	15·40	ditto ...	From 16th June.
	Khoordah	0·06	2·89	16·54	21st Aug. 1870...	From 27th June.
Western.	Midnapore	2·17	Nil	6·37	ditto ...	Not received 7th June to 7th August.
	Bancoorah	3·13	Not received	28·07	14th Aug. 1870.	
	Chyebassa	0·28	3·20	33·78	21st Aug. 1870.	
	Purulia	2·16	5·42	36·18	ditto.	
	Gobindpore	Not received	Not received	0·98	5th June 1870...	From 23rd May.
	Palamow	1·81	ditto	30·52	21st Aug. 1870.	From 6th June.
	Burdwan	3·48	4·85	27·60	ditto.	
	Cutwa	6·46	3·27	20·37	ditto ...	From 4th July.
	Culna	6·89	3·92	20·78	ditto ...	Ditto.
	Bood-Bood	3·04	4·08	13·38	ditto ...	Ditto.
	Raneegunge	3·27	2·17	41·65	ditto.	
	Sooree	5·19	Not received	30·26	14th Aug. 1870...	Not received 4th to 10th July.
	Deoghur	1·53	ditto	27·68	ditto.	
	Burhee	0·42	4·95	32·52	21st Aug. 1870...	Not received 3rd to 16th January, and 7th February to 6th March.
	Hazareebagh	1·32	Not received	35·04	14th Aug. 1870.	
	Panchamba	0·82	ditto	6·31	ditto ...	From 25th July.
	Ranchee	0·22	1·31	33·71	21st Aug. 1870.	
	Sasseram	0·98	2·23	37·69	ditto ...	From 28th March.
Central.	Saugor Island	2·50	5·20	41·50	ditto.	
	Contai	3·27	5·55	24·30	ditto.	
	Calcutta	2·57	5·00	42·74	ditto.	
	Howrah	2·91	3·74	37·97	ditto.	
	Alipore	2·52	6·81	36·30	ditto ...	From 30th May.
	Barrackpore	1·25	Not received	13·16	14th Aug. 1870...	From 16th May.
	Dum Dum	1·90	ditto	21·50	ditto ...	Ditto.
	Baraset	4·23	ditto	26·68	ditto ...	Ditto.
	Satkherah	2·90	ditto	22·28	ditto ...	Ditto.
	Boseerhaut	3·10	ditto	20·98	ditto ...	Ditto.
	Diamond Harbour ...	4·06	ditto	28·84	ditto ...	Ditto.
	Barripore	3·08	ditto	35·23	ditto ...	Ditto.
	Hooghly	7·02	2·98	43·41	21st Aug. 1870.	
	Jessore	3·44	4·04	45·67	ditto.	
	Kishnaghur	2·35	0·76	22·25	ditto ...	From 17th January, and not received 4th to 10th April, and 4th to 17th July.
	Ranaghat	5·10	0·45	27·70	ditto ...	From 7th February, and not received 4th to 10th April.
	Bongong	4·18	2·14	27·81	ditto ...	From 10th January, and not received 4th to 10th April.
	Meharpore	3·91	1·76	30·60	ditto ...	From 7th February, and not received 4th to 10th April.
	Choadangah	2·20	2·80	30·67	ditto ...	Ditto, ditto.
	Kooshteah	2·84	3·22	36·45	ditto.	
	Berhampore	3·88	Not received	30·79	14th Aug. 1870.	
	Furreedpore	5·67	ditto	49·47	ditto.	
	Dowlat Khan	5·95	10·46	22·89	21st Aug. 1870...	From 9th July.
	Burrisaul	1·28	4·70	51·34	ditto.	
	Perozepore	1·69	2·92	19·30	ditto ...	From 11th July.
	Madaripore	1·25	3·70	14·01	ditto ...	Ditto.
North-Western.	Bhangulpore	0·71	1·52	25·30	ditto.	
	Mudhoypoorah ...	2·83	1·88	25·74	ditto ...	From 2nd May.
	Banka	2·31	Not received	22·58	14th Aug. 1870...	From 25th April, and not received 20th to 26th June.
	Monghyr	3·47	7·06	31·63	21st Aug. 1870.	
	Jamooie	Nil	2·53	37·51	ditto ...	From 25th April.
	Begoosari	Not received	3·90	22·03	ditto ...	From 6th May, and not received 23rd to 29th May, and 8th to 14th August.
	Gya	0·12	2·18	23·64	ditto.	
	Sherghotty	0·85	3·22	25·19	ditto ...	From 13th June.
	Nowadah	0·47	5·55	22·04	ditto ...	From 20th June.
	Behar	0·50	Not received	17·04	14th Aug. 1870...	From 21st March.
	Patna	0·15	ditto	15·77	ditto.	
	Arungabad	1·04	3·80	22·90	21st Aug. 1870...	From 11th July.
	Bhubhooah	0·55	0·26	31·77	ditto ...	From 25th April.
	Barh	0·12	Not received	14·55	14th Aug. 1870...	From 16th June, and not ceived 4th to 10th July.
	Arrah	0·56	3·48	23·15	21st Aug. 1870.	
	Buxar	1·44	Not received	21·40	14th Aug. 1870.	
	Chuprah	Nil	1·17	24·27	21st Aug. 1870.	
	Sewan	1·82	Not received	26·47	14th Aug. 1870...	From 2nd May.
	Chumparun	Not received	ditto	33·26	31st July 1870.	
	Benares	1·17	ditto	28·58	14th Aug. 1870.	
	Mozufferpore	2·50	ditto	41·30	ditto ...	From 1st March.
	Dinapore	0·11	0·58	18·19	21st Aug. 1870...	From 14th February.

Circuit	Stations.	Rainfall from 25th to 31st July 1870.	Rainfall from 1st to 7th Aug. 1870.	Rain from 1st January 1870.		Remarks.
				Rain.	Up to date.	
		Inch.	Inch.	Inch.		
Northern.	Rampore Beauleah ...	3·60	3·39	28·74	21st Aug. 1870.	
	Natore	1·44	Not received	20·93	14th Aug. 1870...	From 2nd May, and not received 20th to 26th June.
	Pubna	1·86	5·59	39·27	21st Aug. 1870.	
	Coomercolly	1·78	5·89	35·02	ditto ...	From 2nd May.
	Serajgunge	8·15	Not received	29·12	14th Aug. 1870 ..	From 15th May.
	Maldah	1·34	ditto	25·86	ditto ...	Not received 4th to 10th July.
	Bograh	5·51	ditto	43·14	ditto.	
	Dinagepore	3·00	ditto	50·98	ditto ...	Not received 27th June to 3rd July.
	Rungpore	4·00	2·50	81·21	21st Aug. 1870.	
	Falacottah	8·27	4·84	60·54	ditto ...	From 4th July.
	Boda	6·39	5·57	53·92	ditto ...	From 27th June.
	Titalya	8·75	4·83	65·94	ditto ...	Ditto.
	Buxa	Not received	Not received	238·40	31st July 1870...	Not received 1st to 31st May.
	Rungbee	ditto	ditto	24·35	31st May 1870.	
	Darjeeling { Telegraph Office	ditto	ditto	81·94	31st July 1870.	
	Darjeeling { Jail ...	3·34	ditto	77·53	14th Aug. 1870.	
	Terai	10·61	ditto	88·56	ditto ...	From 27th June.
North-Eastern.	Gowalparah	1·77	ditto	94·88	ditto.	
	Dhobree	1·55	ditto	68·18	ditto ...	From 30th May.
	Gowhatty	Not received	ditto	40·30	7th Aug. 1870.	
	Toora (Garo Hills) ...	4·01	ditto	58·79	14th Aug. 1870...	From 13th June.
	Shillong	2·19	ditto	31·08	14th Aug. 1870.	
	Jowai	Not received	ditto	50·31	7th Aug. 1870...	From 21st June.
	Nunklow	ditto	ditto	120·66	31st July 1870.	
	Nowgong	ditto	ditto	48·90	24th July 1870...	Not received 2nd to 8th May.
	Tezpore	ditto	ditto	57·83	7th Aug. 1870.	
	Dholebagaun	0·85	ditto	54·30	14th Aug. 1870.	
	Burpettah	Not received	ditto	16·05	7th Aug. 1870...	From 4th July.
	Seebsangor	1·12	ditto	59·38	14th Aug. 1870...	Not received 1st to 7th Aug.
	Debrooghur	3·18	ditto	99·36	ditto	
	Suddya	Not received	ditto	39·05	31st July 1870...	From 20th June.
	Samoogoodting ...	ditto	ditto	30·50	ditto.	
Eastern.	Dacca { Telegraph Office ...	7·72	3·06	50·73	21st Aug. 1870.	
	Dacca { Jail ...	6·70	Not received	33·55	14th Aug. 1870...	Not received 4th to 10th July.
	Mymensing	3·05	4·24	48·69	21st Aug. 1870.	
	Jamalpore	2·95	Not received	25·84	14th Aug. 1870...	From 20th June.
	Attcah	7·19	ditto	18·20	ditto ...	From 11th July.
	Kishorgunge	2·65	ditto	9·21	ditto ...	From 1st July, and not received 4th to 10th July.
	Sylhet	11·90	ditto	96·19	ditto.	
	Cachar	10·32	ditto	74·41	ditto.	
	Aenakhall Hylakandy ...	10·50	ditto	72·95	ditto.	
	Tipperah	3·45	ditto	44·51	ditto.	
	Brahmanbariah ...	2·40	ditto	9·55	ditto ...	From 11th July.
	Noakhally	Not received	ditto	43·77	7th Aug. 1870.	
	Chittagong { Telegraph Office	12·10	4·40	62·21	21st Aug. 1870.	
	Chittagong { Jail ...	Not received	Not received	32·73	31st July 1870.	
	Cox's Bazar	4·64	ditto	9·01	14th Aug. 1870...	Fron 20th July.
	Rangamatea Hill	Not received	ditto	43·10	31st July 1870.	
South-Eastern.	Akyab	5·20	8·30	115·10	21st Aug. 1870.	

CALCUTTA,
The 27th August 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Government of Bengal.

Abstract of the Results of the Hourly Meteorological Observations taken at the Surveyor-General's Office, Calcutta, in the month of July 1870.

LATITUDE 22° 33′ 1″ North, Longitude 88° 20′ 34″ East. Height of the Cistern of the Standard Barometer above the Sea Level, 18·11 feet.

MONTHLY RESULTS.

	Inches.
Mean height of the Barometer for the month	29·522
Max. height of the Barometer occurred at 10 A.M. on the 10th	29·695
Min. height of the Barometer occurred at 3 P.M. on the 31st	29·324
Extreme range of the Barometer during the month	0·371
Mean of the daily Max. Pressures	29·573
Ditto ditto Min. ditto	29·462
Mean daily range of the Barometer during the month	0·111

	°
Mean Dry Bulb Thermometer for the month	83·9
Max. Temperature occurred at 1 P.M. on the 14th	93·7
Min. Temperature occurred at 9 P.M. on the 31st	78·5
Extreme range of the Temperature during the month	15·2
Mean of the daily Max. Temperature	89·2
Ditto ditto Min. ditto	80·5
Mean daily range of the Temperature during the month	8·7

Mean Wet Bulb Thermometer for the month	80·9
Mean Dry Bulb Thermometer above Mean Wet Bulb Thermometer	3·0
Computed Mean Dew-point for the month	78·8
Mean Dry Bulb Thermometer above computed mean Dew-point	5·1
	Inches.
Mean Elastic force of Vapour for the month	0·964

	Troy grain.
Mean Weight of Vapour for the month	10·34
Additional Weight of Vapour required for complete saturation	1·79
Mean degree of humidity for the month, complete saturation being unity ...	0·85
	°
Mean Max. Solar Radiation Thermometer for the month	125·2

	Inches.
Rained 26 days,—Max. fall of rain during 24 hours	2·36
Total amount of rain during the month	10·90
Total amount of rain indicated by the gauge* attached to the Anemometer during the month	9·93
Prevailing direction of the Wind	S, S by W & S by E

* Height 70 feet 10 inches above ground.

GOPEENAUTH SEN,
In charge of the Observatory.

The 25th August 1870.

PRINTED BY EDWIN MORRIS LEWIS, AT THE BENGAL SECRETARIAT OFFICE.

No. 36 of 1870.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 7, 1870.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT, *separately, on payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

ORISSA IRRIGATION CIRCLE.

Statement shewing the amount of Traffic and Tolls on the Kendraparah Canal during the month of June 1870.

LOCAL TRAFFIC.						TRAFFIC BETWEEN CUTTACK AND SEA-LOARD.						TOTAL.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of traffic.	Value of cargo.	Tonnage.	Tollage.
		Rs.			Rs. As.						Rs. As. P.			Rs.		Rs. As. P.
5	Paddy ...	567	1,135	...	5 14	1	Treasure ...	15,000	180	...	2 10 0	22	Local.....	20,1 6	174	24 8 0
11	Jaggery ...	14,945	2,989	...	14 12	5	Passengers	8 in No.	2,165	...	10 0 8	61	Through	2,90,339	834	312 2 8
2	Cotton ...	4,670	349	...	1 14	3	Gunns ..	98,150	1,963	...	28 8 0	...	...	...	...	...
4	Empty ...	...	367	...	1 14	1	Rice ..	1,209	816	...	9 14 0	...	...	...	...	...
	Timber ...	4	...	..	0 2	2	Oil cake ...	470	470	...	6 12 0	...	...	...	...	...
...	...	...	...	...	...	35	Paddy ...	5,241	10,188	...	119 0 0	...	...	...	...	...
...	...	...	...	...	..	2	Wines ...	1,698	25	...	25 2 0	...	...	...	...	...
...	...	...	...	...	...	3	Spices ...	45,720	2,296	...	33 12 0	...	...	...	...	...
...	...	...	...	...	...	2	Charcoal ...	3,646	1,323	...	19 8 0	...	...	...	...	...
...	...	...	...	...	...	7	Empty ...	...	1,640	...	27 0 0	...	...	...	...	...
22	...	20,186	4,889	174	24 8	61	...	3,05,339	23,359	834	312 2 8	83	...	3,10,525	1,008	336 10 8

Canal not navigable till 20th June.

ORISSA IRRIGATION CIRCLE.

Statement shewing the amount of Traffic and Tolls in the 1st Section of the High Level Canal during the month of June 1870.

LENGTH OF CANAL, 28 MILES.

LOCAL TRAFFIC.						ABSTRACT.					
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of traffic	Value of cargo.	Tonnage.	Tollage.	REMARKS.
		Rs. As. P.			Rs. As. P.			Rs. As. P.		Rs. As. P.	
3	Empty ...	.....	134	...	1 1 6	6	Local ...	160 0 0	20½	4 7 1	Canal not navigable till 20th June.
2	Vegetables and fruit ...	35 0 0	138	...	0 9 7	...	...	...	...	...	
1	Oil cakes ...	125 0 0	297	...	2 12 0	...	...	...	...	...	
6		160 0 0	569	20½	4 7 1	6		160 0 0	20½	4 7 1	

CALCUTTA,
the 1st September 1870.

J. F. STODDARD, *Lieut.-Col., M.S.C.,*
Asst. to Chief Engineer, Irrigation Branch, Bengal.

DEPARTMENT OF PUBLIC WORKS, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

Statement shewing amount of Traffic and Tolls on the Midnapore Section of High Level Canal for June 1870.

Number of boats.	Nature of cargo.	LOCAL TRAFFIC.				STORES AND MATERIALS FOR IRRIGATION WORKS.					ABSTRACT.				
		Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats.	Nature of traffic.	Value of traffic.	Tonnage.	Tolls paid.
		Rs.			Rs. As. P.		Rs.			Rs. As. P.			Rs.		Rs. As. P.
5	Coal	775	2,925	...	11 12 6	16	2,575	16,075	...	190 15 6	1,326	Local ...	11,55,052	9,270	1,302 7 10
19	Cotton	10,840	5,125	...	28 2 6	...	...	...	...	...	67	Irrgn. words...	84,270	1,545	356 10 4½
14	Firewood	1,820	3,325	...	13 10 6	...	...	...	...	...	...	...	...	...	...
6	Grain	1,500	1,275	...	7 4 0	...	...	...	...	...	...	...	...	...	...
6	Hides and horns	6,675	1,125	...	5 1 6	...	...	...	...	...	...	...	...	...	...
42	Jaggery and sugar	51,525	15,150	...	82 9 6	...	...	...	...	...	...	...	...	...	...
7	Jute	4,350	2,175	...	13 4 6	...	...	...	...	...	...	...	...	...	...
41	Metals	39,000	16,550	...	68 11 6	...	...	...	...	...	...	...	...	...	...
279	Miscellaneous	1,21,770	49,450	...	192 9 6	34	80,640	16,100	...	67 1 0	...	...	...	...	...
55	Oil and oil-seeds	2,25,247	23,950	...	145 3 0	...	...	...	...	...	...	...	...	...	...
31	Rice and paddy	13,0 0	8,000	...	33 0 6	...	...	...	...	...	...	...	...	...	...
150	Piece goods	1,75,175	41,575	...	238 11 0	...	...	...	...	...	...	...	...	...	...
15	Pottery	965	3,100	...	11 10 0	...	...	...	...	...	...	...	...	...	...
26	Salt	46,200	10,600	...	73 2 0	...	...	...	...	...	...	...	...	...	...
32	Silk and indigo	4,42,5 0	5,550	...	22 15 0	...	...	...	...	...	...	...	...	...	...
1	Straw	90	675	...	2 8 6	...	...	...	...	...	...	...	...	...	...
14	Tabacco	20,8 8	5,850	...	33 7 6	...	...	...	...	...	...	...	...	...	...
3	Bamboos	12	75	...	0 3 0	...	...	...	...	...	...	...	...	...	...
87	Passengers	...	9,122	...	47 11 10½	...	...	78	...	0 11 10½	...	...	...	...	...
484	Empty boats	...	50,000	...	224 5 9	7	...	400	...	3 8 6	...	...	...	...	...
	Ghooting	...	...	...	...	10	1,055	9,700	...	94 5 6	...	...	...	...	...
	Bricks	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Miscellaneous revenue	...	...	...	46 7 8½	...	...	...	...	...	...	...	...	...	...
1,326	Total ...	11,55,052	259,547	9,270	1,302 7 10	67	84,270	43,253	1,545	356 10 4½	1,393	...	12,39,322	10,815	1,659 2 2½

J. F. STODDARD, *Lieut.-Col., M.S.C.,*
Asst. to Chief Engineer, Irrigation Branch, Bengal.

CALCUTTA,
The 1st September 1870.

Meteorological Telegraphic Report for the period 28th Aug. to 3rd Sept. 1870.

Stations.	Date.	Hour.	Barometer reduced to 32°.	Barometer reduced to sea-level.	Thermometer. Dry.	Thermometer. Wet.	Humidity Sat. = 100.	Wind. Direction.	Wind. Velocity.	Rain.	Weather initials.	Clouds.
	Aug.				⊖	⊕						
Calcutta.	28th	10	29·690	29·703	85·7	81·0	80	E by S	...	0·02	...	K
		16	29·695	29·623	81·0	78·8	89	S E	...	0·38	*o, r*	
	29th	10	29·745	29·763	85·0	80·6	83	S E	...	0·06	...	K
		16	29·624	29·641	86·0	81·0	79	S S E	...	...	...	C, K
	30th	10	29·658	29·676	81·8	79·5	89	S by E	...	0·17	...	S
		16	29·514	29·532	85·8	80·9	79	S E	...	...	...	S, K
	31st	10	29·568	29·586	84·5	80·5	83	S E	...	...	...	K
	Sept.	16	29·441	29·459	81·0	78·7	91	E by S	...	0·28	...	S
	1st	10	29·611	29·629	80·4	79·5	95	S by E	...	0·16	...	S, N
		16	29·579	29·597	82·2	80·0	91	S S E	...	0·07	*o*	
	2nd	10	29·823	29·841	86·0	82·0	83	S by E	...	0·03	Sends from S by E	K
		16	29·762	29·780	79·0	76·0	95	S by E	...	1·03	*o, r*	
	3rd	10	29·869	29·887	81·0	81·2	87	S	...	1·29	...	S
		16	29·737	29·755	81·8	79·7	91	S S W	...	0·06	...	S
	Aug.											
Saugor Island.	28th	10	29·703	29·711	84	81	87	S W	1	...	*b, u, o*	C, N
		16	29·607	29·613	81	81	79	S W	2	...	*b*	N
	29th	10	29·730	29·736	85	82	91	S S W	1	0·10	*o, v*	N
		16	29·630	29·636	86	81	79	S W	1	...	*b*	N
	30th	10	29·651	29·657	84	82	91	W	1	0·20	*o, p, v*	N
		16	29·548	29·554	85	81	83	S W	1	...	*o, d, u*	N
	31st	10	29·533	29·539	81	80	95	S W	...	2·30	*d, o, u*	N
	Sept.	16	29·474	29·480	81	80	95	W	...	1·40	*o, r, u*	N
	1st	10	29·636	29·642	78	77	95	W S W	1	1·00	*r, o*	N
		16	29·579	29·585	82	80	91	S	1	0·30	*p, o, u*	N
	2nd	10	29·824	29·830	86	82	83	S S W	1	0·10	*b, v, u*	N
		16	29·761	29·767	85	81	83	S S W	1	1·50	*v*	N
	3rd	10	29·8[illegible]0	29·866	83	82	84	S	1	...	*o, u*	N
		16	29·753	29·759	85	81	83	S	2	...	...	N
	Aug.											
Chittagong.	28th	10	29·652	29·762	85	80	79	E S E	3·6*	...	*b*	C, CK
		16	29·595	29·704	86	81	79	S E	10·1*	...	*m*	K, KS
	29th	10	29·697	29·807	84	79	79	N E	5·1*	...	*m*	CK, KS
		16	29·540	29·649	88	81	72	W S W	6·0*	...	*b*	C, CK
	30th	10	29·629	29·739	83	80	87	E	5·[illegible]*	0·40	*b, v*	K
		16	29·447	29·556	83	79	83	S	6·0*	...	*m*	K, KS
	31st	10	29·513	29·623	84	79	79	S E	6·[illegible]*	...	*m*	K, S
	Sept.	16	29·465	29·575	83	79	83	S W	11·0*	...	*b*	K, KS,
	1st	10	29·655	29·765	84	78	75	E	6·8*	...	*b*	C, KS
		16	29·603	29·713	84	80	83	W S W	12·4*	...	*m, u*	KS
	2nd	10	29·820	29·929	87	81	76	E S E	4·7*	...	*b*	K
		16	29·746	29·857	80	78	91	S S W	13·5*	0·10	*d, g u*	N
	3rd	10	29·863	29·975	77	76	95	W S W	4·6*	0·70	*r, o, g*	N
		16	29·738	29·850	80	78	91	S	5·4*	0·20	...	K, KS
	Aug.											
Madras.	27th	10	29·743	29·773	87	77	61	S S W	9*	0·02	*b c*	
		16	29·637	29·637	90	77	86	E by S	7*	...	*b c*	
	28th	10	29·756	29·786	88	76	55	W	10*	...	*b c*	
		16	29·651	29·681	85	80	79	E S E	10*	0·01	*b c*	
	29th	10	29·808	29·838	87	77	61	S W	7*	0·03	*b c*	
		16	29·719	29·749	74	73	95	E by S	6*	2·51	*b c*	
	30th	10	29·792	29·822	85	75	60	W S W	13*	0·12	*b c*	
		16	29·663	29·693	89	75	49	S S E	8*	..	*b c*	
	31st	10	29·741	29·771	84	72	53	W	12*	...	*b c*	
	Sept.	16	29·631	29·661	91	73	39	W N W	14*	...	*b c*	
	1st	10	29·735	29·765	87	74	51	W by S	7*	...	*b c*	
		16	29·644	29·674	86	76	61	E by S	7*	...	*b c*	
	2nd	10	29·814	29·844	88	78	62	W N W	9*	0·01	*b c*	
		16	29·718	29·748	87	78	65	E	9*	...	*b c*	
	Aug.											
Cuttack.	27th	10	29·668	29·750	84	80	83	W	12*	0·20	*b*	C, N
		16	29·630	29·712	86	81	79	N W	12*	...	*u*	N
	28th	10	29·655	29·737	84	83	83	N E	1*	0·70	*u*	KS, N
		16	29·555	29·637	85	81	83	S S E	21*	...	*d, u*	N
	29th	10	29·578	29·660	83	80	87	S	...	0·30	*d, u*	N
		16	29·503	29·615	85	81	83	S S E	4*	...	...	C, N
	30th	10	29·593	29·675	86	81	79	W	4*	...	...	C, CS
		16	29·513	29·595	86	81	79	N N W	4*	..	*b*	CS, KS
	31st	10	29·538	29·621	82	79	87	N W	3*	1·10	*r, g*	N
	Sept.	16	29·463	29·545	86	81	79	S W	6*	...	*u*	C, KS, N
	1st	10	29·570	29·653	82	79	87	S W	3*	1·70	*u, o, d, r*	N
		16	29·513	29·595	86	81	79	S	7*	...	*u*	KS, N
	2nd	10	29·781	29·863	85	81	83	S S E	4*	0·10	*u, l, d*	N
		16	29·746	29·857	80	79	91	S S W	13·5*	0·10	*g, d, u*	N
	Aug.											
Akyab.	28th	10	29·825	29·840	82	78	82	S E	1	0·90	...	CS, K
		16	29·667	29·682	82	77	78	S W	1	...	*b*	C, CS, K
	29th	10	29·802	29·817	80	77	86	N	1	0·50	*b, g*	CS, KS
		16	29·726	29·741	82	78	82	S W	...	...	*b*	CS, K, C, S
	30th	10	29·712	29·727	80	77	86	S S E	1	2·20	*b*	C, K, KS
		16	29·627	29·642	82	78	82	S W	1	...	*b*	C, K, CK
	31st	10	29·678	29·693	78	75	86	W	2	0·70	*r*	N
	Sept.	16	29·580	29·595	81	77	83	S	1	0·30	...	K, KS, C
	1st	10	29·754	29·769	83	78	78	S	1	...	...	K, KS, N
		16	29·692	29·707	84	80	83	S S W	1	...	...	C, K, CK
	2nd	10	29·989	30·004	77	75	90	S	1	2·10	*r*	N
		16	29·792	29·807	80	78	91	N E	1	0·90	*g*	K, KS
	3rd	10	29·946	29·961	78	75	86	S S W	1	0·40	*d*	N
		16	29·821	29·836	80	77	86	S S W	1	0·10	*b*	C, S, K, CK

Velocity of wind in miles per hour.

CALCUTTA,
The 3rd September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Govt. of Bengal.

Weekly Report of Rainfall compiled at the Meteorological Reporter's Office.

Circuit.	Stations.	Rainfall from 15th to 21st August 1870.	Rainfall from 22nd to 28th August 1870.	Rain from 1st January 1870.		Remarks.
				Rain.	Up to date.	
		Inch.	Inch.	Inch.		
South-Western.	Pooree	Not received	Not received	12·26	14th Aug. 1870.	
	False Point	5·35	ditto	28·00	21st Aug. 1870.	
	Cuttack { Telegraph Office ...	6·90	1·79	29·99	28th Aug. 1870.	
	Cuttack { Jail... ...	5·10	1·51	28·59	ditto.	
	Sumbalpore	3·73	Not received	34·45	21st Aug. 1870...	Not received 18th to 24th July, and 1st to 7th August.
	Balasore	3·57	ditto	26·31	ditto.	
	Bhudruck	2·89	1·96	20·25	28th Aug. 1870...	From 16th June.
	Khoordah	5·05	Not received	18·72	21st Aug. 1870 ..	From 27th June.
Western.	Midnapore	Nil	3·77	10·14	28th Aug. 1870...	Not received 7th June to 7th August.
	Bancoorah	2·01	Not received	30·98	21st Aug. 1870.	
	Chyebassa	3·30	3·59	37·37	28th Aug. 1870.	
	Purulia	5·42	3·48	39·96	ditto.	
	Gobindpore	Not received	Not received	0·98	5th June 1870...	From 23rd May.
	Palamow	3·57	ditto	34·09	21st Aug. 1870 ...	From 6th June.
	Burdwan	4·85	2·14	29·74	28th Aug. 1870.	
	Cutwa	3·27	9·27	29·64	ditto ..	From 4th July.
	Culna	3·92	3·50	24·28	ditto ...	Ditto.
	Bood-Bood	4·08	3·53	16·91	ditto ...	Ditto.
	Raneegunge	2·17	2·20	43·85	ditto.	
	Sooree	Not received	Not received	30·26	14th Aug. 1870...	Not received 4th to 10th July.
	Deoghur	2·10	ditto	30·18	21st Aug. 1870.	
	Burhee	4·95	1·12	33·64	28th Aug. 1870.	Not received 3rd to 16th January, and 7th February to 6th March.
	Hazareebagh	5·58	Not received	40·62	21st Aug. 1870.	
	Panchamba	1·89	1·57	9·77	28th Aug. 1870...	From 25th July.
	Ranchee	1·81	Not received	38·71	21st Aug. 1870.	
	Sasseram	2·23	0·60	38·29	28th Aug. 1870...	From 28th March.
Central.	Saugor Island	5·20	3·80	45·30	ditto.	
	Contai	5·55	1·85	26·15	ditto.	
	Calcutta	5·00	2·13	44·87	ditto.	
	Howrah	3·74	2·48	40·45	ditto.	
	Alipore	6·81	2·10	38·70	ditto ...	From 30th May.
	Barrackpore	Not received	Not received	13·16	14th Aug. 1870...	From 16th May.
	Dum Dum	ditto	ditto	21·50	ditto ...	Ditto.
	Baraset	ditto	ditto	26·68	ditto ...	Ditto.
	Satkherah	ditto	ditto	22·28	ditto ...	Ditto.
	Boseerhaut	ditto	ditto	20·98	ditto ...	Ditto.
	Diamond Harbour ...	ditto	ditto	28·84	ditto ...	Ditto.
	Barripore	ditto	ditto	35·23	ditto ...	Ditto.
	Hooghly	2·98	0·94	44·35	28th Aug. 1870.	
	Jessore	4·04	3·34	49·01	ditto.	
	Kishnaghur	0·76	6·13	28·38	ditto ...	From 17th January, and not received 4th to 10th April, and 4th to 17th July.
	Ranaghat	0·45	4·20	31·90	ditto ...	From 7th February, and not received 4th to 10th April.
	Bongong	2·14	7·65	35·46	ditto ...	From 10th January, and not received 4th to 10th April.
	Meharpore	1·76	3·31	33·01	ditto ...	From 7th February, and not received 4th to 10th April.
	Choudangah	2·80	4·60	35·27	ditto ...	Ditto, ditto.
	Kooshteah	3·23	3·42	39·86	ditto.	
	Berhampore	3·61	Not received	34·10	21st Aug. 1870.	
	Furreedpore	1·93	ditto	51·40	ditto.	
	Dowlat Khan	10·16	5·10	27·99	28th Aug. 1870...	From 9th July and not received 1st to 7th August.
	Burrisaul	4·70	1·17	52·51	ditto.	
	Perozepore	2·62	1·80	21·10	ditto ...	From 11th July.
	Madaripore	3·70	2·09	16·10	ditto ...	Ditto.
North-Western.	Bhaugulpore	1·52	3·28	28·58	ditto.	
	Mudheypoorah ...	1·88	3·01	28·75	ditto ...	From 2nd May.
	Banka	1·99	1·87	26·35	ditto ...	From 25th April, and not received 20th to 26th June.
	Monghyr	7·06	21·70	53·33	ditto.	
	Jamooie	2·53	5·55	43·06	ditto ...	From 25th April.
	Begoosari	3·90	4·11	26·14	ditto ...	From 16th May, and not received 23rd to 29th May, and 8th to 14th August.
	Gya	2·18	3·61	27·25	ditto.	
	Sherghotty	3·22	Not received	25·19	21st Aug. 1870 ...	From 13th June.
	Nowadah	5·56	ditto	22·04	ditto ...	From 20th June.
	Behar	5·38	ditto	22·42	ditto ...	From 21st March.
	Patna	0·70	ditto	16·47	ditto.	
	Arungabad	3·80	ditto	29·00	ditto ...	From 11th July.
	Bhubhooah	0·26	1·71	33·48	ditto ...	From 25th April.
	Barh	4·89	Not received	19·44	21st Aug. 1870 ...	From 16th May, and not received 4th to 10th July.
	Arrah	3·18	4·85	28·00	28th Aug. 1870.	
	Buxar	1·98	Not received	33·38	21st Aug. 1870.	
	Chuprah	1·17	4·13	28·40	28th Aug. 1870.	
	Sewan	0·23	5·31	33·01	ditto ...	From 2nd May.
	Chumparun	Not received	Not received	38·26	14th Aug. 1870.	
	Benares	1·20	ditto	29·78	21st Aug. 1870.	
	Mozufferpore	4·40	ditto	44·30	ditto ...	From 1st March.
	Dinapore	0·58	7·81	26·00	28th Aug. 1870...	From 4th February.

Circuit	Stations.	Rainfall from 15th to 21st Aug. 1870.	Rainfall from 22nd to 28th Aug. 1870.	Rain from 1st January 1870.		Remarks.
				Rain.	Up to date.	
		Inch.	Inch.	Inch.		
Northern.	Rampore Beauleah ...	3·39	4·92	33·66	28th Aug. 1870.	
	Natore	1·94	Not received	22·87	21st Aug. 1870...	From 2nd May, and not received 20th to 26th June.
	Pubna	5·59	3·04	42·31	28th Aug. 1870.	
	Coomercolly	5·89	3·14	38·16	ditto ..	From 2nd May.
	Serajgunge	2·84	Not received	31·96	21st Aug. 1870...	From 15th May.
	Maldah	0·91	ditto	26·77	ditto ...	Not received 4th to 10th July.
	Bograh	3·20	ditto	46·34	ditto.	
	Dinagepore	4·96	ditto	55·94	ditto ...	Not received 27th June to 3rd July.
	Rungpore	2·50	3·00	51·21	28th Aug. 1870...	
	Julpigoorie	5·34	3·25	111·13	ditto ...	From 2nd May.
	Falacottah	4·84	1·58	52·12	ditto ...	From 4th July.
	Boda	5·57	1·53	55·45	ditto ...	From 27th June.
	Titalya	4·83	3·64	69·58	ditto ...	Ditto.
	Buxa	Not received	3·00	241·40	ditto ...	Not received 1st to 31st May, and 1st to 21st Aug.
	Rungbo	ditto	Not received	23·35	31st May 1870.	
	Darjeeling { Telegraph Office	ditto	ditto	99·11	15th Aug. 1870.	
	Darjeeling { Jail ...	7·80	ditto	85·33	21st Aug. 1870.	
	Terai	Not received	ditto	27·39	14th Aug. 1870 ..	From 18th July.
North-Eastern.	Gowalpurah	2·50	ditto	97·33	21st Aug. 1870.	
	Dhobree	3·65	ditto	71·83	ditto ...	From 30th May.
	Gowhatty	Not received	ditto	40·68	14th Aug. 1870.	
	Toora (Garo Hills) ...	6·20	ditto	61·99	21st Aug. 1870.	From 13th June.
	Shillong	2·59	ditto	33·07	ditto.	
	Jowai	4·12	ditto	54·43	ditto ...	From 21st June and not received 8th to 14th Aug.
	Nunklow	Not received	ditto	120·66	31st July 1870.	
	Nowgong	ditto	ditto	48·90	24th July 1870...	Not received 2nd to 8th May.
	Tezpore	ditto	ditto	57·83	7th Aug. 1870.	
	Dholebagaun	7·25	ditto	61·55	21st Aug. 1870.	
	Burpettah	4·70	ditto	21·35	ditto ...	From 4th July.
	Seebsangor	4·56	ditto	63·91	ditto. ...	Not received 1st to 7th Aug.
	Debrooghur	4·18	ditto	103·54	ditto.	
	Suddya	Not received	ditto	39·05	31st July 1870...	From 20th June.
	Samoogoodting ...	ditto	ditto	34·00	7th Aug. 1870.	
Eastern.	Dacca { Telegraph Office ...	3·06	2·77	53·50	28th Aug. 1870...	
	Dacca { Jail ...	3·00	Not received	36·55	21st Aug. 1870 ..	Not received 4th to 10th July.
	Mymensing	4·24	2·48	51·17	28th Aug. 1870.	
	Jamalpore	6·54	Not received	32·38	21st Aug. 1870 ...	From 20th June.
	Attesh	6·21	ditto	25·40	ditto. ...	From 11th July.
	Kishorgunge	4·37	ditto	14·08	ditto. ...	From 1st July, and not received 4th to 10th July.
	Sylhet	8·17	ditto	104·36	ditto.	
	Cachar	4·65	ditto	79·08	ditto.	
	Asnakhall Hylakandy ...	4·59	ditto	77·54	ditto.	
	Tipperah	4·10	ditto	48·61	ditto.	
	Brahmanbariah ...	7·12	ditto	16·67	ditto ...	From 11th July.
	Noakhally	Not received	ditto	46·95	14th Aug. 1870.	
	Chittagong { Telegraph Office	4·40	2·50	64·71	28th Aug. 1870.	
	Chittagong { Jail ...	Not received	Not received	44·36	14th Aug. 1870...	Not received 1st to 7th Aug.
	Cox's Bazar	7·40	ditto	16·41	21st Aug 1870 ..	From 29th July.
	Rangamatea Hill	Not received	ditto	57·54	14th Aug. 1870.	
South-Eastern.	Akyab	8.30	11·50	126·60	28th Aug. 1870.	

CALCUTTA,
The 3rd September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Government of Bengal.

Abstract of Observations as received in the Meteorological Reporter's Office, Calcutta,

DURING THE HALF MONTH 16TH TO 30TH JUNE 1870.

N. B.—The Barometric data are reduced for temperature, and not for height above sea level.

STATIONS.	Height above sea level.	BAROMETER. Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	Range.	THERMOMETER. Solar Radiation. Mean.	Max. Day.	Max. ⊖	Min. Day.	Min. ⊖	Mean of max.	Mean daily range.	Mean of min.	Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	Highest Max. Day.	Highest Max. ⊖	Absolute range.	Lowest Min. Day.	Lowest Min. ⊖	HUMIDITY. Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	RAINFALL In inches.	No. of days.
Port Blair ...	218	29·563	...	29·604	29·523	...	·081	130·0	28th	161·0	18th	97·0	85·0	10·5	74·5	...	...	81·0	82·3	...	30th	88·0	18·0	23rd	72·0	...	...	89	87	...	13·06	15
Madras ...	29	29·699	...	29·752	29·646	...	·106	...	...	...	...	...	...	...	...	...	...	87·1	88·7	...	...	...	...	...	...	...	...	57	56	...	6·09	6
Vizagapatam ...	31	29·602	29·579	29·645	29·549	29·633	·096	...	...	...	...	...	87·0	4·0	83·0	85·0	84·1	85·6	85·8	84·5	17th	92·5	13·5	19th	79·0	71	75	68	67	75	6·50	8
Akyab ...	15	Not received.																														
False Point ...	18·7	29·698	29·603	29·663	29·592	29·646	·071	...	...	...	...	...	...	...	...	85·6	83·9	86·7	86·7	85·1	...	...	...	...	...	84	85	84	84	85	5·80	7
Chittagong ...	80	29·541	29·502	29·582	29·491	29·588	·091	149·7	16th	165·0	20th	126·0	89·5	8·7	80·8	85·0	81·5	87·8	87·1	83·5	17th	95·5	16·9	20th	78·6	81	87	76	75	86	7·66	8
Saugor Island ...	6	29·583	29·566	29·622	29·527	29·618	·095	137·2	26th	164·0	24th	93·2	88·7	7·1	81·6	85·9	84·1	87·1	87·3	85·1	16th	91·6	13·2	25th	78·4	84	88	82	81	86	3·17	8
Chittagong ...	108	29·582	29·576	29·606	29·527	29·620	·079	149·6	18th	156·8	22nd	133·0	87·7	12·6	75·1	81·6	77·6	84·8	84·5	79·5	18th	91·1	15·3	21st	72·3	87	93	80	84	91	12·71	11
Calcutta ...	18·11	29·571	29·557	29·610	29·516	29·600	·094	122·8	29th	131·3	16th	109·5	87·4	8·0	79·4	82·8	80·6	84·3	84·7	81·6	16th	91·9	14·9	21st	77·0	88	94	85	83	92	12·37	11
Dacca ...	15	29·566	29·564	29·601	29·515	29·593	·086	122·1	18th	153·0	21st	92·3	85·3	10·0	78·3	82·3	79·3	85·6	83·9	80·6	17th	92·6	16·9	22nd	75·7	87	94	82	83	91	12·09	14
Cherra ...	35	29·593	29·576	29·628	29·537	29·630	·091	143·9	28th	154·0	20th	103·0	88·1	11·9	76·2	81·4	78·5	84·2	83·4	79·4	19th	92·8	19·7	21st	73·1	93	100	87	87	98	8·44	10
Kurseong ...	78	29·581	29·562	29·629	29·518	29·615	·111	125·9	25th	141·0	28th	92·0	88·0	11·6	76·4	81·6	77·8	84·0	85·1	78·7	19th	95·0	20·0	22nd	75·0	90	99	84	84	95	9·91	13
Darjeeling ...	2,014	27·558	27·545	27·583	27·511	27·592	·072	141·9	23rd	163·0	20th	102·0	85·2	12·5	72·7	77·9	74·9	80·1	80·3	76·3	24th	90·0	20·0	21st	70·0	82	88	76	76	87	6·75	14
Cawnpore ...	80	29·504	29·499	29·554	29·441	29·523	·113	148·5	23rd	162·0	20th	107·0	91·4	12·6	78·8	84·1	80·2	86·8	87·5	82·1	23rd	95·0	17·5	24th	77·5	84	92	80	76	91	5·99	6
Agra ...	171	29·375	29·356	29·411	29·324	29·400	·087	147·5	16th	163·0	27th	124·0	93·5	15·3	77·9	82·9	79·1	86·3	85·7	80·8	16th	104·3	29·4	21st	74·9	80	87	73	76	85	4·36	9
Meerut ...	160	29·392	29·384	29·434	29·327	29·426	·107	144·7	16th	164·0	21st	126·0	90·5	13·2	77·3	82·7	79·7	84·6	85·7	81·2	16th	99·0	25·9	21st	74·0	85	92	79	79	90	4·67	9
Roorkee* ...	6,958	23·252	23·236	23·276	23·231	23.264	·045	117·8	25th	138·0	18th	79·7	68·4	11·7	56·7	62·2	58·8	64·3	64·3	61·3	25th	73·0	19·0	25th	54·0	93	97	89	89	97	24·60	15
Peshawar ...	386	29·256	29·242	29·303	29·201	29·277	·102	140·4	17th	159·0	30th	117·4	84·3	10·0	74·3	79·1	76·6	79·6	82·0	78·1	23rd	89·4	18·2	16th	71·2	91	97	91	86	93	16·75	14
Mooltan ...	425	25·098	25·091	25·126	25·065	25·111	·061	127·3	19th	145·0	24th	88·5	74·3	9·3	65·0	68·8	66·1	70·0	71·7	67·3	23rd	76·5	13·0	21st	63·5	88	92	88	83	89	6·08	13
Jacobabad* ...	260	29·309	29·304	29·341	29·265	29·326	·076	...	...	...	...	...	96·7	20·8	75·9	85·9	79·6	90·4	91·0	82·6	19th	104·0	32·0	29th	72·0	76	88	63	63	85	2·80	5
Kurrachee* ...	880	28·630	28·633	28·678	28·595	28·616	·083	131·7	19th	153·0	28th	91·0	94·1	16·2	77·9	85·7	80·2	88·2	90·3	84·3	20th	106·5	32·2	28th	74·3	67	78	60	58	71	4·94	7

* No correction for index error has been applied to the Benares and Roorkee Barometric readings.

CALCUTTA—JUNE.

Mean barometric pressure of 16 years ...	29·543	Mean temperature of 16 years ...	84·9	Mean humidity of 16 years ...	81	Mean rainfall of 16 years ...	12·64
Ditto ditto of 1870 ...	29·604	Ditto ditto of 1870 ...	84·7	Ditto ditto of 1870 ...	82	Actual fall of 1870 ...	16·09
Excess in 1870 ...	·061	Defect in 1870 ...	0·2	Excess in 1870 ...	1	Excess in 1870 ...	3·45

CALCUTTA,
The 2nd September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Govt. of Bengal.

ERRATUM.

In the half-monthly Meteorological Abstract published in the Supplement of the *Calcutta Gazette* No. 34 of the 24th August 1870, *for* 1st to 15th May, *read* 1st to 15th June 1870.

Mean Pressures and Temperatures of the preceding Table reduced to sea level, with mean Wind directions.

STATIONS.	Mean Barometric pressure reduced to sea level.	Mean Temperature reduced to sea level.	Proportional prevalence Max=100.	Mean direction.
Port Blair	29·789	79	100	S 44° W
Madras	29·729	.....	26	S 13° W
Vizagapatam	29·634	85·1	74	S 12° E
Akyab	Not received.			
False Point	29·645	85·6	68	S 50° W
Cuttack	29·622	85·2	61	S 12° W
Saugor Island	29·589	85·9	76	S 56° W
Chittagong	29·694	81·9	64	S 44° E
Calcutta	29·590	82·8	81	S 6° E
Jessore	29·582	82·3	82	S 6° E
Dacca	29·629	81·4	89	S 14° E
Cachar	29·656	81·8	13	S 74° E
Hazareebaugh	29·544	83·6	35	S 24° W
Berhampore	29·586	84·3	53	S 27° E
Patna	29·550	83·4	59	N 79° E
Monghyr	29·545	83·1	65	S 79° E
Darjeeling	29·626	82·1	37	S 54° E
Gowalparah	29·649	80·2	21	N 84° E
Shillong	29·657	82·5	32	S 66° W
Benares	29·571	86·6	15	S 68° E
Roorkee	29·498	88·3	52	S 47° E

NOTE.

Barometric Pressure.—The pressures in column 2 of the above Table for all stations below 500 feet are reduced from those given in column 3 of the Table on the previous page by adding the weight of a column of air of the corresponding temperatures given in column 17. For stations of above 500 feet elevation, the reduction is made by Dippe's Tables as given in Guyot's "Meteorological and Physical Tables."

Temperature.—The temperatures in column 3 are reduced from those in column 17, on the preceding page, by adding 1° Fahr. for every 350 feet.

Wind Direction.—The mean wind direction and its comparative prevalence are calculated from the whole number of wind observations recorded during the half-month. The latter is given as a percentage of the whole number of observations. The mean direction is calculated in the usual way by Lambert's formula.

The above being all comparable, afford the data for constructing a meteorological chart for the half-month which shall shew the isobaric and isothermal lines, and the resultant wind directions, which last may be represented by arrows of varying length proportioned to the prevalence of the wind. To these may be added the rainfall from the previous Tables.

CALCUTTA, *The 2nd September* 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Government of Bengal.

Results of the Meteorological Observations taken at the Surveyor-General's Office, Calcutta, from 22nd to 31st August 1870.

Month.	Date.	Mean reduced Barometer.	Thermometer. Highest Reading.	Thermometer. Lowest Reading.	Max. Solar radiation.	Mean Dry Bulb.	Mean Wet Bulb.	Computed Mean Dew-point.	Mean degree of humidity.	Wind. Prevailing direction.	Wind. Max. pressure.	Wind. Daily velocity.	Rain.	General Remarks.
		Inches.	°	°	°	°	°	°			lb	Miles.	Inches	
August	22nd	29·551	85·5	80·3	...	82·4	80·5	79·2	0·90	S S W & S S E	...	126·6	0·28	Chiefly stratoni. Thunder at 8¼ and 9¼ A.M. Lightning on S at 8 and 9 P.M. Slight rain at 3, 8, 9, and 10 A.M., and 7 and 9½ P.M.
	23rd	·561	85·0	79·5	133·5	81·7	79·1	77·3	·87	S S W & S W	...	37·4	0·05	Stratoni and cumuli. Lightning at Midnight. Slight rain at 4¼ A.M. and 2 and 3½ P.M.
	24th	·604	79·5	76·5	...	78·3	7·2	76·4	·94	S S W & S W	...	132·1	0·44	Chiefly overcast. Thunder at 2 P.M. Slight rain from 4 to 12 A.M. and at 4 P.M.
	25th	·623	80·7	78·0	...	79·5	78·8	78·3	·96	S S W, S S E & S by E	...	99·7	0·85	Chiefly overcast. Thunder at 6¼ and 7½ A.M. Slight rain from 1¾ to 4 A.M. and 7 A.M. to 3 P.M.
	26th	·626	86·5	78·5	139·2	81·6	79·4	77·9	·89	S E, S S E & S by E	...	78·5	0·06	Stratoni and cumuli. Slight rain at 5¾ and 11 A.M.
	27th	·628	87·0	78·4	145·5	82·2	79·3	77·3	·86	S by E & S S E	...	122·2	0·05	Stratoni and cumuli. Slight rain at 12 A.M. and 11½ P.M.
	28th	·650	88·0	80·0	147·0	82·3	80·1	78·6	·89	S by E & S S E	...	93·1	0·46	Overcast and cumuli. Slight rain at midnight and 1 A.M., and from 1¼ to 5 P.M., and at 7¼ P.M.
	29th	·682	87·3	79·8	142·5	83·0	80·1	78·1	·86	S S E & S by E	...	63·4	0·12	Cirrostrati, stratoni, and cirri. Rain at 4½ P.M.
	30th	·596	86·5	80·2	141·4	82·6	80·1	78·3	·87	S	...	73·6	0·35	Chiefly stratoni. Rain at 8 A.M. and 6½ P.M.
	31st	·515	87·5	80·0	140·3	82·2	79·9	78·3	·88	S & S E	0·3	48·4	0·36	Cirrostrati and cumuli. Thunder and brisk wind at 3½ P.M. Slight rain at 2¼, 3¼, 8, and 9½ P.M.

The mean Barometer, as likewise the Dry and Wet Bulb Thermometer means, are derived from the twenty-four hourly observations made during the day.

The Dew-point is computed with the Greenwich constants.—The figures in column ten represent the humidity of the air, the complete saturation of which being taken at unity.—The receiver of the lower rain gauge is 1½ feet, and that of the Anemometer 70 feet 10 inches, above the level of the ground.—The velocity of wind, as indicated by Robinson's Anemometer, is registered from noon to noon.

		°
The extreme variation of temperature during the past ten days	...	11·5
The max. temperature during the past ten days	...	88·0
The max. temperature during the corresponding period of the past year	...	91·2
The mean humidity during the past ten days	...	0·89
The mean humidity during the corresponding period of the past year	...	0·85
		Inches.
The total fall of rain from 22nd to 31st ... by lower rain gauge	...	3·92
The total fall of rain from 22nd to 31st ... by Anemometer gauge	...	2·86
Ditto ditto, average of sixteen previous years	...	3·83
Ditto between the 1st January and the 31st August	...	45·66
Ditto ditto ditto, average of 16 years	...	51·64

GOPEENAUTH SEN,
In charge of the Observatory.

The 2nd September 1870.

PRINTED BY EDWIN MORRIS LEWIS, AT THE BENGAL SECRETARIAT OFFICE.

No. 37 of 1870

SUPPLEMENT TO

The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 14, 1870.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT, *separately, on payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

Coal in the Chittagong Hill Tracts.

From H. B. MEDLICOTT, ESQ., Officiating Superintendent, Geological Survey of India, to H. S. BEADON, ESQ., Officiating Under-Secretary to the Government of Bengal,—(No. 846, dated Calcutta, the 30th August 1870.)

I HAVE the honor to acknowledge your letter No. 3293 of 22nd August 1870, calling for an opinion upon the prospects of a search for coal in Chittagong.

2. Without intending to discourage the search for coal, or finally to pronounce against the likelihood of useful coal being found in that region, I can confidently state that the prospects at present held out are very far from encouraging. The "coal" samples sent from Chittagong belong distinctly to a class that has as yet in India proved of no value whatever: even if large quantities of coal of the same quality as those samples were found it would be almost valueless. The most favorable opinion was given in saying that "it is *possible* that beds of coal of somewhat better quality may be found where the above occurs."

3. In view of these very unfavorable prospects, and of the very pressing demands upon the survey for similar investigations of a more promising character in other parts of India, I regret to say it would be impracticable during the coming working season to depute an officer to examine the Chittagong country, the whole staff being already told off for work that cannot be abandoned. Being however strongly impressed with the duty of obtaining reliable information regarding a matter of so much practical importance, the earliest opportunity will be taken to send a competent officer to investigate the ground where this poor lignite coal was discovered.

4. It would of course be very hazardous to attempt any boring experiments without a careful preliminary examination by a competent geologist; and hence it would be premature at present to enter upon the consideration of cost.

From H. S. BEADON, ESQ., Officiating Under-Secretary to the Government of Bengal, to the Commissioner of the Chittagong Division,—(No. 3571, dated Fort William, the 12th September 1870.)

IN continuation of my endorsement No. 3294, dated the 22nd ultimo, I am directed to forward herewith a copy of a letter* from the Officiating Superintendent, Geological Survey of India, regarding the existence of coal mines in the Hill Tracts of Chittagong, and to request that you will reconsider the matter with reference to this report and submit in a definite form any proposal which you may still think it necessary to make.

* No. 846, dated 30th August.

From LORD H. ULICK BROWNE, Commissioner of the Chittagong Division, to the Secretary to the Government of Bengal, General Department,—(No. 183, dated Chittagong, the 30th July 1870.)

I HAVE the honor to bring to the notice of the Lieutenant-Governor that Mr. Nuthall, Superintendent of Kheddahs, when out on duty, found a specimen of supposed coal in the Hill Tracts of Chittagong. Lignite had been previously found in two or three places.

2. I sent the coal found by Mr. Nuthall to the Superintendent of the Geological Survey of India, copy of whose report* is herewith enclosed.

* No. 624, dated 4th February 1870.

3. It will be observed that the Superintendent thinks it possible that beds of coal worth working might be found near the place where the lump of brown coal was found, and as such a discovery would be of the greatest advantage to the Hill Tracts and to the port of Chittagong, I think it would be well worth while to expend a moderate sum of money in borings to be conducted under supervision of an officer in the Geological Department.

From F. STOLICZKA, ESQ., PH.D., Officiating for Superintendent, Geological Survey of India, to LORD H. ULICK BROWNE, Commissioner of the Chittagong Division,—(No. 624, dated Calcutta, the 4th February 1870.)

I HAVE the honor to acknowledge your official No. 322 dated Chittagong, 24th January 1870, and in reply to observe that the specimens forwarded are *brown coal* of rather an inferior quality. An analysis of a portion of the coal transmitted gave—

Carbon	36·5
Volatile matter	38
Ash	25·5
	100

The proportion of ash is too large to hold out for this coal a profitable prospect; it besides contains a large quantity of iron pyrites, and gives up a strong smell of sulphur during combustion. It is, however, possible that beds of coal of somewhat better quality may be found where the above occurs.

From H. S. BEADON, ESQ., Officiating Under-Secretary to the Government of Bengal, to the Superintendent of the Geological Survey of India,—(No. 3293, dated Fort William, the 22nd August 1870.)

WITH reference to the accompanying copy of a letter* from the Commissioner of Chittagong, I am directed to inquire whether in your opinion it is desirable to extend the search for coal in the locality therein referred to, and if so, whether your department could undertake to prosecute it, and at what cost.

* No. 183, dated 30th ultimo.

2. It is suggested that, if necessary, you should place yourself in communication with the Commissioner for further information.

Meteorological Telegraphic Report for the period 4th to 10th September 1870.

Stations.	Date.	Hour.	Barometer reduced to 32°.	Barometer reduced to sea-level.	Thermometer. Dry.	Thermometer. Wet.	Humidity Sat. =100.	Wind. Direction.	Wind. Velocity.	Rain	Weather initials.	Clouds
	Sept.											
Calcutta.	4th	10	29·784	29·802	84·0	81·0	87	S S W	...	0·70	...	K, S
		16	29·668	29·686	81·0	79·4	93	S by E	...	0·30	*o, and low scuds from S by E*	
	5th	10	29·771	29·789	83·7	80·3	85	S by E	...	...	...	K, & scuds from S by E.
		16	29·658	29·676	84·5	80·2	81	S E	...	...	*d*	S & scuds from S
	6th	10	29·795	29·813	84·0	80·0	83	S	...	0·03	...	K & scuds.
		16	29·684	29·702	81·9	78·7	87	S by E	...	0·05	...	C, CS
	7th	10	29·838	29·856	83·9	79·2	79	S by E	...	...	...	K, C
		16	29·706	29·724	85·2	78·8	75	S	...	...	...	K, C
	8th	10	29·801	29·819	84·6	79·0	75	S S W	...	...	...	C, K
		16	29·682	29·700	87·5	80·0	70	S by W	...	...	...	C, K
	9th	10	29·768	29·786	85·2	80·9	83	S S W	...	...	...	K
		16	29·634	29·652	87·0	80·5	74	S S W	...	...	...	C
	10th	10	29·753	29·771	85·8	81·2	79	S S W	...	...	...	S, K
		16	29·648	29·666	82·4	78·8	85	S	...	0·36	*o, r*	
Saugor Island.	4th	10	29·790	29·796	85	82	87	S W	1	1·20	*v*	N
		16	29·679	29·685	83	80	87	S	2	...	*o, u*	C, N
	5th	10	29·762	29·762	84	80	83	S S W	1	...	*b*	C K, N
		16	29·689	29·695	84	80	83	S	2	...	*b, u*	N
	6th	10	29·812	29·818	81	79	91	S W	1	0·90	*d, o*	N
		16	29·682	29·688	84	80	83	S	1	0·20	*b, u*	C, N
	7th	10	29·848	29·854	83	80	87	S W	1	0·10	*b, v*	N
		16	29·725	29·731	86	80	75	S W	1	..	*b*	N
	8th	10	29·824	29·830	86	82	83	S S W	2	...	*b*	N
		16	29·715	29·721	86	82	83	S S W	2	...	*b*	N
	9th	10	29·796	29·802	87	82	79	S W	2	...	*b*	N
		16	29·652	29·658	87	82	79	S	3	...	*b*	N
	10th	10	29·764	29·770	84	82	91	W	2	1·80	*o, d, u*	N
		16	29·669	29·675	86	83	87	S W	2	...	*o, u*	N
Chittagong.	4th	10	29·756	29·868	81	78	86	S W	4·5*	0·30	*g, u*	K, KS
		16	29·669	29·779	85	79	75	S W	9·9*	...	*b*	C K
	5th	10	29·749	29·858	86	81	79	W	4·8*	0·10	*b, v*	N
		16	29·612	29·721	86	80	75	W	4·0*	...	*b*	K
	6th	10	29·756	29·866	85	80	79	S W	5·1*	...	*b*	K, K S
		16	29·642	29·752	85	80	79	S W	12·4*	...	*b*	K, C
	7th	10	29·813	29·923	87	80	72	S	4·7*	...	*b*	K, CK, C S
		16	29·692	29·802	85	80	79	W	5·9*	...	*b*	K, KS
	8th	10	29·744	29·854	85	81	83	S	8·6*	0·70	*b, v*	K
		16	29·632	29·741	86	79	72	S W	7.5*	...	*b*	C S, N
	9th	10	29·744	29·853	88	81	72	S	6·4*	0·30	*b, v*	K
		16	29·622	29·732	85	80	79	S W	14·4*	...	*b*	K, KS
	10th	10	29·722	29·832	82	80	91	S E	6·8*	0·60	*b, v*	K, C S
		16	29·642	29·752	81	80	83	S S E	13·3*	0·10	*b, m*	K, KS
Madras.	3rd	10	29·873	29·903	87	78	65	S by E	7*	...	*b c*	
		16	29·744	29·774	84	76	67	S E	12*	...	*b c*	
	4th	10	29·864	29·894	86	78	68	S E by E	8*	...	*b c*	
		16	29·705	29·735	85	77	68	S E	12*	0·27	*b c*	
	5th	10	29·851	29·881	85	77	68	S by N	9*	...	...	
		16	29·755	29·785	79	71	77	N N W	3*	1·37	*t*	
	6th	10	29·841	29·871	84	73	56	N W by N	10*	...	*b c*	
		16	29·719	29·749	85	78	73	E by N	8*	...	*b c*	
	7th	10	29·863	29·893	86	78	68	S S W	5*	...	*b c*	
		16	29·743	29·773	87	78	65	S E	10*	...	*m*	
	8th	10	29·859	29·589	85	79	68	N	9*	...	*b c*	
		16	29·738	29·768	85	78	71	E by S	7*	...	*b c*	
	9th	10	29·838	29·868	88	79	65	W	8*	...	*b c*	
		16	29·740	29·770	86	77	64	S E by E	7*	...	*b c*	
Cuttack.	3rd	10	29·781	29·863	86	82	83	S E	5*	...	*u*	N, KS
		16	29·677	29·760	82	79	87	S S E	7*	...	*o, u, t, l*	N
	4th	10	29·804	29·886	84	80	83	S	2*	...	*o*	N
		16	29·682	29·764	86	81	79	S	5*	...	...	C, C K, N
	5th	10	29·764	29·846	84	80	83	W	4*	2·10	*m*	KS
		16	29·608	29·690	83	79	83	S S E	16*	...	*b, d*	KS, C S
	6th	10	29·756	29·838	84	80	83	S	1*	...	*b, d*	CS, KS
		16	29·652	29·734	85	80	79	S	9*	...	*b*	N, C K
	7th	10	29·786	29·868	85	82	87	S S E	9*	...	*b, d*	KS, CS
		16	29·672	29·754	86	81	79	S	3·2*	...	*b*	KS, C S
	8th	10	29·761	29·843	87	81	76	S	3*	...	*b*	KS
		16	29·694	29·776	88	82	76	S S E	3·2*	...	*b*	CS
	9th	10	29·761	29·843	87	82	79	S S E	4*	0·40	...	N, KS C, CK
		16	29·627	29·709	87	82	79	S	21*	...	*b*	KS, C
Akyab.	4th	10	29·888	29·903	81	77	82	S	1	...	...	C, K, CS, KS
		16	29·759	29·774	81	78	86	W	1	0·30	*b*	C, K, CS, N
	5th	10	29·828	29·843	81	78	86	N W	1	...	*b*	K, CS, KS
		16	29·746	29·761	82	79	87	W	1	...	*b*	N, CS, KS
	6th	10	29·923	29·938	83	78	78	S E	1	0·10	*b*	C, K
		16	29·764	29·779	83	79	83	W	1	...	*g*	K S
	7th	10	29·908	29·923	81	78	86	W	1	0·20	*d*	K, KS, N
		16	29·791	29·806	84	79	79	S W	1	...	*b*	C, S, F
	8th	10	29·895	29·910	82	79	87	S E	1	0·30	*b*	C K
		16	29·771	29·786	84	79	79	S S W	1	...	*b*	C,K, CS
	9th	10	29·923	29·938	80	78	91	S	1	0·70	*b*	K,S, N
		16	29·751	29·766	84	79	79	S	1	...	*b*	C, K
	10th	10	29·851	29·866	84	79	79	S W	1	...	*b*	K, CS, KS
		16	29·719	29·734	85	80	79	S W	1	...	*b*	CK, KS

* Velocity of wind in miles per hour.

CALCUTTA,
The 10th September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Govt. of Bengal.

Weekly Report of Rainfall compiled at the Meteorological Reporter's Office.

Circuit	Stations.	Rainfall from 22nd to 28th August 1870.	Rainfall from 29th Aug. to 4th Sept 1870.	Rain from 1st January 1870. Rain.	Rain from 1st January 1870. Up to date.	Remarks.
		Inch.	Inch.	Inch.		
South-Western.	Pooree	1·82	Not received	20·78	28th Aug. 1870.	
	False Point ...	1·15	ditto	29·15	ditto.	
	Cuttack { Telegraph Office ...	1·70	3·20	33·19	4th Sept. 1870.	
	Cuttack { Jail... ...	1·51	3·97	32·56	ditto.	
	Sumbulpore	4·67	Not received	39·12	28th Aug. 1870...	Not received 18th to 24th July, and 1st to 7th August.
	Balasore	4·67	ditto	30·98	ditto.	
	Bhuddruck	1·96	2·51	22·76	4th Sept. 1870...	From 16th June.
	Khoordah	3·75	Not received	22·47	28th Aug. 1870.	From 27th June.
Western.	Midnapore	3·77	1·06	14·20	4th Sept. 1870...	Not received 7th June to 7th August.
	Bancoorah ...	3·45	Not received	33·53	28th Aug. 1870.	
	Chyebassa	3·59	ditto	37·37	ditto.	
	Purulia	3·18	3·20	13·16	4th Sept. 1870.	
	Gobindpore	Not received	Not received	0·98	5th June 1870...	From 23rd May.
	Palamow	5·43	ditto	39·52	28th Aug. 1870...	From 6th June.
	Burdwan	2·14	0·62	30·36	4th Sept. 1870.	
	Cutwa	9·27	1·87	31·51	ditto ...	From 4th July.
	Culna	3·50	1·08	25·36	ditto ...	Ditto.
	Bood-Bood	3·53	1·66	18·57	ditto ...	Ditto.
	Raneegunge	2·20	2·81	16·66	ditto.	
	Sooree	6·41	2·63	50·67	ditto.	
	Deoghur	2·65	Not received	32·83	28th Aug. 1870.	
	Burhee	1·12	1·31	31·98	4th Sept. 1870.	Not received 3rd to 16th January, and 7th February to 6th March.
	Hazareebaugh	1·62	Not received	42·24	28th Aug. 1870.	
	Panchamba	1·57	ditto	9·77	ditto ...	From 25th July.
	Ranchee	1·93	0·80	44·44	4th Sept. 1870.	
	Sasseram	0·60	0·70	38·30	ditto ...	From 28th March.
Central.	Saugor Island	3·80	8·10	53·40	ditto.	
	Contai	1·85	3·53	29·68	ditto.	
	Calcutta	2·13	4·12	49·29	ditto.	
	Howrah	2·18	5·12	45·87	ditto.	
	Alipore	2·40	2·80	41·50	ditto ...	From 30th May.
	Barrackpore	0·54	Not received	13·89	28th Aug. 1870...	From 16th May.
	Dum Dum	1·60	ditto	29·09	ditto ..	Ditto.
	Baraset	2·86	ditto	32·36	ditto ...	Ditto.
	Satkherah	3·60	ditto	26·18	ditto ...	Ditto.
	Boseerhaut	4·30	ditto	28·50	ditto ...	Ditto.
	Diamond Harbour ...	11·13	ditto	13·24	ditto ...	Ditto.
	Barripore	7·20	ditto	13·91	ditto ...	Ditto.
	Hooghly	0·91	1·95	46·30	4th Sept. 1870.	
	Jessore	3·34	1·23	50·24	ditto.	
	Kishnaghur	6·13	1·31	29·72	ditto ..	From 17th January, and not received 4th to 10th April, and 4th to 17th July.
	Ranaghat	4·20	1·60	33·50	ditto ...	From 7th February, and not received 4th to 10th April.
	Bongong	7·65	0·58	36·01	ditto ...	From 10th January, and not received 4th to 10th April.
	Meharpore	3·31	0·77	34·68	ditto ...	From 7th February, and not received 4th to 10th April.
	Choadangah	4·60	0·70	35·97	ditto ...	Ditto, ditto.
	Kooshteah	3·42	1·40	41·26	ditto.	
	Berhampore	3·14	Not received	37·54	28th Aug. 1870.	
	Furreedpore	6·20	ditto	57·60	ditto.	
	Dowlat Khan	5·10	3·05	31·01	4th Sept. 1870...	From 9th July and not received 1st to 7th August.
	Burrisaul	1·17	3·80	56·31	ditto.	
	Perozepore	1·80	0·76	21·86	ditto ...	From 11th July.
	Madaripore	2·09	1·56	17·66	ditto ...	Ditto.
North-Western.	Bhaugulpore	3·28	0·92	29·50	ditto.	
	Mudheypoorah ...	3·01	0·80	29·55	ditto ...	From 2nd May.
	Banka	1·87	3·78	30·13	ditto ...	From 25th April, and not received 20th to 26th June.
	Monghyr	21·70	1·26	54·59	ditto.	
	Jamooie	5·55	3·16	46·22	ditto ...	From 25th April.
	Begoosari	4·11	4·47	30·61	ditto ...	From 16th May, and not received 23rd to 29th May, and 8th to 14th August.
	Gya	3·61	1·93	29·18	ditto.	
	Sherghotty	3·04	2·40	30·63	ditto ...	From 13th June.
	Nowadah	6·84	1·60	30·48	ditto ...	From 20th June.
	Behar	5·92	Not received	28·34	28th Aug. 1870...	From 21st March.
	Patna	4·74	ditto	21·21	ditto.	
	Arungabad	1·12	1·95	25·07	4th Sept. 1870...	From 11th July.
	Bhubhooah	1·71	Not received	33·48	28th Aug. 1870...	From 25th April.
	Barh	6·15	ditto	25·59	ditto ...	From 16th May, and not received 4th to 10th July.
	Arrah	4·85	1·74	29·74	4th Sept. 1870.	
	Buxar	8·10	Not received	31·48	28th Aug. 1870.	
	Chuprah	4·13	0·43	28·83	4th Sept. 1870.	
	Sewan	5·31	1·33	34·34	ditto ...	From 2nd May.
	Chumparun	3·33	Not received	48·29	28th Aug. 1870.	
	Benares	2·53	ditto	32·31	ditto.	
	Mozufferpore	5·90	ditto	50·20	ditto .	From 1st March.
	Dinapore	7·81	0·70	26·70	4th Sept. 1870...	From 4th February.

Circuit	Stations.	Rainfall from 22nd to 28th Aug. 1870.	Rainfall from 29th Aug. to 4th Sept. 1870.	Rain from 1st January 1870.		Remarks.
				Rain.	Up to date.	
		Inch.	Inch.	Inch.		
Northern.	Rampore Beauleah ...	4·92	0·94	34·60	4th Sept. 1870.	
	Natore	5·89	Not received	28·76	28th Aug. 1870..	From 2nd May, and not received 20th to 26th June.
	Pubna	3·04	1·63	43·94	4th Sept. 1870.	
	Coomercolly	3·14	1·18	39·34	ditto ...	From 2nd May.
	Serajgunge	2·46	Not received	34·42	28th Aug. 1870...	From 16th May.
	Maldah	3·87	ditto	30·64	ditto ...	Not received 4th to 10th July.
	Bograh	7·50	ditto	53·84	ditto.	
	Dinagepore	2·43	ditto	58·37	ditto ...	Not received 27th June to 3rd July.
	Rungpore	3·00	2·50	53·71	4th Sept 1870.	
	Julpigoorie	3·25	6·45	117·58	ditto ...	From 2nd May.
	Falacottah	1·58	5·43	57·55	ditto ...	From 4th July.
	Boda	1·53	5·87	61·32	ditto ...	From 27th June
	Titalya	3·64	5·14	74·72	ditto ...	Ditto.
	Buxa	3·00	7·00	248·40	ditto ...	Not received 1st to 31st May, and 1st to 21st Aug.
	Rungbee	Not received	Not received	57·65	31st Aug. 1870...	Not received 1st June to 31st July.
	Darjeeling { Telegraph Office	ditto	ditto	99·11	15th Aug. 1870.	
	Darjeeling { Jail ...	2·66	ditto	87·99	28th Aug. 1870.	
	Terai	3·79	ditto	31·18	ditto ...	From 18th July, and not received 15th to 21st Aug.
North-Eastern.	Gowalparah	3·80	3·39	14·57	4th Sept. 1870.	
	Dhobree	Not received	Not received	71·83	21st Aug. 1870 ...	From 30th May.
	Gowhatty	1·35	ditto	43·40	28th Aug. 1870.	
	Toora (Garo Hills) ...	3·93	ditto	68·92	ditto ...	From 13th June.
	Shillong	3·50	ditto	37·17	ditto.	
	Jowai	5·66	ditto	60·69	ditto. ...	From 21st June and not received 8th to 14th Aug.
	Nunklow	Not received	ditto	120·66	31st July 1870.	
	Nowgong	ditto	ditto	48·90	24th July 1870 ...	Not received 2nd to 8th May.
	Tezpore	ditto	ditto	61·53	21st Aug. 1870 ...	Not received 8th to 14th Aug.
	Dholebagann	3·90	ditto	65·45	28th Aug. 1870.	
	Burpettah	Not received	ditto	21·35	21st Aug. 1870 ...	From 4th July.
	Seebsaugor	4·85	ditto	68·79	28th Aug. 1870...	Not received 1st to 7th Aug.
	Debrooghur	2·87	ditto	106·41	ditto.	
	Suddya	Not received	ditto	42·10	21st Aug. 1870 ..	From 20th June, and not received 1st to 14th Aug.
	Samoogoodting ...	ditto	ditto	35·50	14th Aug. 1870.	
Eastern.	Dacca { Telegraph Office ...	2·77	3·46	56·96	4th Sept. 1870.	
	Dacca { Jail ...	3·10	Not received	39·65	28th Aug. 1870...	Not received 4th to 10th July.
	Mymensing	2·48	ditto	51·17	ditto.	
	Jamalpore	3·43	ditto	35·81	ditto ...	From 20th June.
	Atteah	4·23	ditto	29·63	ditto ..	From 11th July.
	Kishorgunge	3·12	ditto	17·20	ditto ...	From 1st July, and not received 4th to 10th July.
	Sylhet	7·42	ditto	111·78	ditto.	
	Cachar	2·33	ditto	81·39	ditto.	
	Aenakhall Hylakandy ...	2·62	ditto	80·16	ditto.	
	Tipperah	3·31	ditto	51·92	ditto.	
	Brahmanbariah ...	2·64	ditto	19·31	ditto ...	From 11th July.
	Noakhally	11·29	ditto	66·37	ditto.	
	Chittagong { Telegraph Office	2·50	1·80	66·51	4th Sept. 1870.	
	Chittagong { Jail ...	2·55	Not received	54·32	28th Aug. 1870...	Not received 1st to 7th Aug.
	Cox's Bazar	6·02	ditto	22·43	ditto ...	From 29th July.
	Rangamatea Hill	Not received	ditto	62·24	21st Aug. 1870.	
South-Eastern.	Akyab	11·50	7·50	134·10	4th Sept. 1870.	

CALCUTTA,
The 10th September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Government of Bengal.

Abstract of Observations as received in the Meteorological Reporter's Office, Calcutta,

DURING THE HALF MONTH 1ST TO 15TH JULY 1870.

N. B.—The Barometric data are reduced for temperature, and not for height above sea level.

STATIONS.	Height above sea level.	BAROMETER. Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	Range.	THERMOMETER. Solar Radiation. Mean.	Solar Radiation. Max. Day.	Solar Radiation. Max. ⊖	Solar Radiation. Min. Day.	Solar Radiation. Min. ⊖	Mean of max.	Mean daily range.	Mean of min.	Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	Highest Max. Day.	Highest Max. ⊕	Absolute range.	Lowest Min. Day.	Lowest Min. ⊕	HUMIDITY. Mean.	Mean of 4 hours.	Mean of 10 hours.	Mean of 16 hours.	Mean of 22 hours.	RAINFALL In inches.	No. of days.
Port Blair ...	218	29·533	...	29·570	29·497	...	·073	148·4	3rd	167·0	15th	127·0	87·7	11·4	76·3	...	...	84·5	83·5	...	3rd	92·0	18·0	14th	74·0	...	...	83	83	...	5·91	15
Madras ...	29	29·686	...	29·740	29·632	...	·108	...	...	...	...	...	...	...	...	...	...	85·4	88·3	...	...	...	...	...	...	...	...	60	57	...	0·51	3
Vizagapatam ...	31	29·587	29·554	29·617	29·522	29·597	·095	...	...	...	...	...	88·1	1·2	83·9	85·9	84·5	86·2	87·7	85·3	3rd	91·5	9·3	12th	82·2	72	77	70	67	75	3.60	6
Akyab ...	15	29·733	29.704	29·772	29·709	29·748	·063	...	...	...	...	...	...	...	...	81.6	80·7	81·8	82·9	82·1	...	...	...	...	...	84	85	84	82	85	14.59	18
False Point ...	18·7	29 621	29.608	29·658	29·576	29·642	·082	...	...	...	...	...	...	...	...	87·4	86·1	88·[illegible]	88.6	86·6	...	...	...	...	...	82	84	81	80	85	2·55	3
Cuttack ...	80	29·544	29.518	29·595	29·486	29·576	·109	154·5	6th	161·0	15th	139·0	90·92	8·3	82·6	86·9	83·2	89·1	9[illegible]·1	85·5	13th	94·0	12·4	10-11th	81·6	79	87	76	72	82	5·08	10
Saugor Island ...	6	29·588	29.573	29·629	29·537	29·612	·092	146·1	10th	158·4	9th	130·0	90·0	8·0	82·0	87·0	84·8	88·[illegible]	88·8	85·9	14th	91·5	12.2	5th	79·3	82	88	80	78	85	1·84	8
Chittagong ...	108	29·577	29.576	29·607	29·529	29·597	·078	150·0	10th	166·8	8th	132·0	86·8	10·7	76·1	81·7	78·1	84·7	54·1	79·9	5th	89·5	15·3	2nd	74·2	87	94	82	81	92	3·38	10
Calcutta ...	18·11	29 573	29.559	29·618	29 519	29·597	·099	126·2	14th	132·0	8th	110·8	90·1	9·2	80·9	84·9	81·4	86·7	88·2	83·4	14th	93·7	14·9	9th	78·8	85	93	81	76	89	1.24	7
Jessore ...	15	29·570	29.545	29·606	29·507	29·581	·099	127·8	14th	151·0	12th	108·0	91·1	11·8	79·3	84·0	80·4	87·7	85·6	82·2	6th	93·0	15·5	10th	77·5	86	94	78	72	91	4·53	12
Dacca ...	35	29·577	29.556	29·624	29·527	29·602	·097	148·4	11th	155·8	8th	125·0	89·0	11·2	77·8	82·1	79·5	84·8	83·8	80·4	4th	93·0	17·0	5th	75·4	89	96	82	84	93	3·54	10
Chekar ...	73	29·561	29.545	29·615	29·498	29·585	·117	125·1	15th	156·0	8th	100·0	86·9	10·3	76·6	81·3	78·2	82·6	84·6	79·7	14-15th	91·0	17·[illegible]	8th	74·0	92	98	90	86	96	10·97	14
Hazareebaugh ...	2,014	27·568	27·55[illegible]	27·594	27·528	27·596	·086	149·6	6th	152·0	8th	121·0	85·8	14·1	73·7	78·7	75·6	81·7	80·4	77·1	1st	88·0	16·0	9th	72·0	83	90	75	78	88	7·90	10
Berhampore ...	80	29·495	29·493	29·544	29·430	29·515	·114	...	...	...	...	...	92.8	13·1	79·7	85·0	81·0	87·5	88.[illegible]	83·1	2nd	97·0	20·0	8-10th	77·0	84	92	80	75	88	8·22	10
Patna ...	171	29·352	29·336	29·396	29·309	29·369	·087	143·0	1st	156·0	15th	127·0	91·2	12·9	78·3	82·0	79·0	85·3	85·7	81·4	1st	95·3	19.4	8th	75·9	85	91	81	79	88	3·34	11
Monghyr ...	150	29·367	29·350	29·418	29·317	29·385	·101	148·1	5th	157·0	12th	133·0	9[illegible]·5	11·6	78·9	83·7	80·8	85·3	86·[illegible]	82·3	8th	94·[illegible]	18·0	17th	76.0	85	91	82	76	90	5·00	10
Darjeeling ...	6,958	23·215	23·190	23·242	23·201	23.229	·041	119·7	10th	135·0	12th	102·0	68·4	8·9	59·5	63·5	60·9	64·7	66.1	62·3	15th	73·0	15·0	3rd	58.0	93	97	90	90	97	13·83	15
Goalpara ...	386	29·221	29·212	29·277	29·165	29·229	·112	132·8	11th	155·0	1st	86·0	83·7	9·1	74·6	78·6	76·2	79·3	81.3	77·6	15th	88·3	15·5	1st	72·8	93	96	92	89	95	21.82	12
Shillong ...	425	25·066	25·050	25·105	25 035	25·074	·070	130·0	4th	149·0	8th	85·0	71·0	7·7	66·3	69·2	67·1	70·1	72·3	67·6	15th	77.0	12·[illegible]	2nd	65·0	86	89	88	79	89	9·85	10
Benares * ...	260	29·292	29.281	29 342	29·253	29·293	·089	...	...	...	...	...	96·9	21·3	75·6	85·2	80·6	89·3	89.3	81·7	7th	102·0	30·0	4th	72·0	82	91	72	74	93	9·23	9
Roorkee * ...	880	28·585	28.578	28 637	28·553	28·571	·084	138·0	3rd	149·0	4th	129·0	94·2	15·1	79 1	86·2	80·0	87·6	93.1	84·2	14th	100·2	25·9	2nd	74 3	76	91	71	57	86	3·20	4

* No correction for index error has been applied to the Benares and Roorkee Barometric readings.

CALCUTTA,
The 10th September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Govt. of Bengal.

Mean Pressures and Temperatures of the preceding Table reduced to sea level, with mean Wind directions.

STATIONS.	Mean Barometric pressure reduced to sea level.	Mean Temperature reduced to sea level.	Proportional prevalence Max=100.	Mean direction.
Port Blair	29·749	80·5	100	S 44° W
Madras	29·716	.....	62	S 72° W
Vizagapatam	29·598	86·0	77	S 13° W
Akyab	29·749	81·6	93	S 26° E
False Point	29·640	87·1	76	S 29° W
Cuttack	29·626	87·1	67	S 1° W
Sangor Island	29·594	87·0	93	S 42° W
Chittagong	29·689	82·0	85	S 44° E
Calcutta	29·592	81·9	91	S
Jessore	29·576	84·0	92	S 2° E
Dacca	29·613	82·1	80	S 2° E
Cachar	29·636	81·5	18	N 58° W
Hazareebaugh	29·533	84·4	54	S 10° W
Berhampore	29·577	85·2	75	S 8° E
Patna	29·527	83·5	32	S 63° E
Monghyr	29·520	84·1	34	S 74° E
Darjeeling	29·560	83·4	44	S 60° W
Gowalparah	29·614	79·7	26	S 11° W
Shillong	29·617	82·9	63	S 38° W
Benares	29·555	85·9	30	S 50° W
Roorkee	29·427	88·8	35	S 48° E

NOTE.

Barometric Pressure.—The pressures in column 2 of the above Table for all stations below 500 feet are reduced from those given in column 3 of the Table on the previous page by adding the weight of a column of air of the corresponding temperatures given in column 17. For stations of above 500 feet elevation, the reduction is made by Dippe's Tables as given in Guyot's "Meteorological and Physical Tables."

Temperature.—The temperatures in column 3 are reduced from those in column 17, on the preceding page, by adding 1° Fahr. for every 350 feet.

Wind Direction.—The mean wind direction and its comparative prevalence are calculated from the whole number of wind observations recorded during the half-month. The latter is given as a percentage of the whole number of observations. The mean direction is calculated in the usual way by Lambert's formula.

The above being all comparable, afford the data for constructing a meteorological chart for the half-month which shall shew the isobaric and isothermal lines, and the resultant wind directions, which last may be represented by arrows of varying length proportioned to the prevalence of the wind. To these may be added the rainfall from the previous Tables.

CALCUTTA,
The 10th September 1870.

HENRY F. BLANFORD,
Meteorological Reporter to the Government of Bengal.

Results of the Meteorological Observations taken at the Surveyor-General's Office, Calcutta, from 1st to 7th September 1870.

Month.	Date.	Mean reduced Barometer.	Thermometer. Highest Reading.	Thermometer. Lowest Reading.	Max. Solar radiation.	Mean Dry Bulb.	Mean Wet Bulb.	Computed Mean Dew-point.	Mean degree of humidity.	Wind. Prevailing direction.	Wind. Max. pressure.	Wind. Daily velocity.	Rain.	General Remarks.
		Inches.	°	°	°	°	°	°			lb	Miles.	Inches	
Sept. ...	1st	29·589	82·2	78·7	124·5	80·3	78·8	77·7	0·92	S E & S by E	...	104·3	0·18	Chiefly overcast. Slight rain after intervals from 6 A.M. to 2 P.M. and at 6½ P.M.
	2nd	·771	86·0	78·5	137·8	80·5	79·2	78·3	·93	S S E & S	1·3	161·1	2·41	Chiefly overcast. Brisk wind at 4½ P.M. Thunder at 11 & 12 A.M. & 3 P.M. Rain from 1¾ to 3 A.M. & 11½ A.M. to 7 P.M.
	3rd	·800	85·0	79·5	119·5	81·6	79·7	78·4	·90	S	...	88·0	0·06	Chiefly stratoni. Thunder at 1¾ P.M. Slight rain at 1 P.M.
	4th	·735	85·5	78·2	134·0	80·5	79·0	77·9	·92	S S W & S by W	1·0	146·1	1·00	Overcast and clouds of different kinds. Thunder at 1 P.M. Rain at midnight and 1 A.M. & from 12½ A.M. to 2 P.M.
	5th	·719	86·3	77·8	140·0	81·3	79·0	77·1	·88	S	...	141·4	0·03	Cirrostrati & cirr & cumuli. Ligh rain at 12 A.M., 3½ & 4 P.M.
	6th	·737	86·4	78·4	142·0	81·6	78·8	76·8	·86	S & S by E	...	134·0	0·05	Cumuli, cirri & cirro-strati. Light rain at 7 & 10 A.M. & 2½ P.M.
	7th	·773	87·0	78·5	142·2	82·1	78·9	76·1	·83	S by E & S	...	168·7	...	Cirri and cumuli. Drizzled at 7 P.M.

The mean Barometer, as likewise the Dry and Wet Bulb Thermometer means, are derived from the twenty-four hourly observations made during the day.

The Dew-point is computed with the Greenwich constants.—The figures in column ten represent the humidity of the air, the complete saturation of which being taken at unity.—The receiver of the lower rain gauge is 1½ feet, and that of the Anemometer 70 feet 10 inches, above the level of the ground.—The velocity of wind, as indicated by Robinson's Anemometer, is registered from noon to noon.

		°
The extreme variation of temperature during the past seven days	...	9·2
The max. temperature during the past seven days	...	87·0
The max. temperature during the corresponding period of the past year	...	91·0
The mean humidity during the past seven days	...	0·89
The mean humidity during the corresponding period of the past year	...	0·86
		Inches.
The total fall of rain from 1st to 7th ... by lower rain gauge	...	3·73
The total fall of rain from 1st to 7th ... by Anemometer gauge	...	3·64
Ditto ditto, average of sixteen previous years	...	2·19
Ditto between the 1st January and the 7th September	...	49·39
Ditto ditto ditto, average of 16 years	...	53·83

GOPEENAUTH SEN,
In charge of the Observatory.

The 10th September 1870.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY MAIN LINE.

Approximate Return of Traffic for week ended 27th August 1870 *on* 1,131½ *miles open.*

	Coaching Traffic.			Merchandise and Mineral Traffic.			Total Traffic Receipts.
	Number of Passengers.	Coaching Receipts.		Weight carried.	Receipts.		
		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£. s. d.
Total Traffic for the week	77,506	96,876 11 4	8,880 7 4	404,211 0	*2,72,491 13 4	24,978 8 4	33,858 15 8
Or per mile of Railway	.....	85 9 11	7 17 0		240 13 2	22 1 6	29 18 6
For previous 7 weeks of half-year	639,337¼	8,01,506 15 4	73,471 9 5	3,603,926 20	25,03,194 4 4	229,459 9 6	302,930 18 11
Total for 8 weeks ...	716,843¾	8,98,383 10 8	82,351 16 9	4,008,137 20	27,75,686 1 8	254,437 17 10	336,789 14 7
COMPARISON.							
Total for corresponding week of previous year	87,067	1,20,834 3 4	11,076 9 5	599,846 10	3,33,081 4 8	30,532 9 1	41,608 18 6
Per mile of Railway corresponding week of previous year ...	.....	106 13 5	9 15 10	.....	294 8 0	26 19 11	36 15 9
Total to corresponding date of previous year	760,067½	9,52,626 2 6	87,324 1 3	4,343,634 0	24,49,204 9 6	224,510 8 6	311,834 9 9

* Rs. 4,477-15-9 added on account of freight of locomotive coal carried on Jubbulpore line.

EAST INDIAN RAILWAY JUBBULPORE LINE.

Approximate Return of Traffic for week ended 27th August 1870 *on* 223 *miles open.*

		Rs As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	2,732	6,665 9 11	611 0 4	11,830 10	4,415 13 3	404 15 8	1,015 16 0
Or per mile of Railway	.....	29 14 3	2 14 9	.....	19 12 10	1 16 4	4 11 1
For previous 7 weeks of half-year	23,816¼	61,963 7 9	5,679 19 8	133,655 20	44,492 3 11	4,078 9 2	9,758 8 10
Total for 8 weeks ...	26,548¾	68,629 1 8	6,291 0 0	145,485 30	48,908 1 2	4,483 4 10	10,774 4 10
COMPARISON.							
Total for corresponding week of previous year	2,822	5,979 12 11	548 3 0	42,026 20	5,533 14 2	507 5 5	1,055 8 5
Per mile of Railway corresponding week of previous year ...	.....	26 13 0	2 9 2	.....	24 13 1	2 5 6	4 14 8
Total to corresponding date of previous year	23,969¼	53,168 13 10	4,873 16 3	302,062 0	63,027 0 10	5,777 9 5	10,651 5 8

EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for Week ended 27th August 1870 *on* 113¼ *miles open.*

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	28,251	11,749 15 0	1,077 1 7	108,365 32	25,500 12 3	2,337 11 5	3,414 13 0
Or per mile of Railway	249	103 12 0	9 10 2	957 0	225 2 9	20 12 10	30 3 0
For previous 8 weeks of half-year	150,359	79,674 8 9	7,303 10 0	574,191 36	1,09,179 12 7½	10,008 2 11	17,311 12 11
Total for 9 weeks ...	178,610	91,424 7 9	8,380 11 7	682,560 28	1,34,680 8 10½	12,345 14 4	20,726 5 11
COMPARISON.							
Total for corresponding week of previous year	21,399½	11,233 14 4	1,029 15 6	118,465 37½	29,477 0 0	2,702 1 2	3,731 16 8
Per mile of Railway corresponding week of previous year ...	189	99 3 2	9 1 10	1,046 0	260 4 6	23 17 2	32 19 0
Total to corresponding date of previous year	200,484	1,11,112 4 9¾	10,185 5 11	836,581 34	1,71,722 10 8	15,741 4 10	25,926 10 9

CALCUTTA AND SOUTH-EASTERN STATE RAILWAY.

Approximate Return of Traffic for Week ended 27th August 1870 *on* 28 *miles open.*

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	4,023¼	705 15 0	70 11 11	7,055 24	234 10 9	23 9 4	94 1 3
Or per mile of Railway	144	25 3 5	2 10 5	252 0	8 6 1	0 16 9	3 7 2
For previous 21 weeks of half-year	114,947	19,586 5 0	1,958 12 7	212,823 0	7,400 5 9	740 0 9	2,698 13 4
Total for 22 weeks ...	118,970¼	20,292 4 0	2,029 4 6	219,878 24	7,635 0 6	763 10 1	2,792 14 7
COMPARISON.							
Total for corresponding week of previous year	3,975	706 4 9	64 14 11	9,673 0	315 3 3	28 17 10	95 12 9
Per mile of Railway corresponding week of previous year	142	25 3 7	2 6 3	345 0	11 4 1	1 0 8	3 6 11
Total to corresponding date of previous year	103,409	19,663 14 9¼	1,802 10 5	234,184 0	15,550 3 0	1,425 8 7	3,227 19 0

EAST INDIAN RAILWAY MAIN LINE.

Approximate Return of Traffic for Week ended 3rd September 1870 on 1,131½ miles open.

	Coaching Traffic.			Merchandise and Mineral Traffic.			Total Traffic Receipts.
	Number of Passengers.	Coaching Receipts.		Weight carried.	Receipts.		
		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	88,432½	1,19,892 7 3	10,990 2 10	443,793 0	* 3,24,610 11 6	25,755 19 8	40,746 2 6
Or per mile of Railway	.....	105 15 4	9 14 3	.....	286 14 2	26 6 0	36 0 3
For previous 8 weeks of half-year	7,16,843½	8,98,383 10 8	82,351 16 9	4,008,137 20	27,75,686 1 8	254,437 17 10	336,789 14 7
Total for 9 weeks	805,276	10,18,276 1 11	93,341 19 7	4,451,930 20	31,06,296 13 2	2,84,193 17 6	377,535 17 1
Comparison.							
Total for corresponding week of previous year	86,384½	1,12,201 0 9	10,285 1 11	624,541 20	3,55,717 6 11	32,607 8 8	42,892, 10 7
Per mile of Railway corresponding week of previous year ...	.....	99 2 7	9 1 10	.....	314 6 0	28 16 4	37 18 2
Total to corresponding date of previous year	846,452	10,64,827 3 3	97,609 3 2	4,968,475 20	28,04,922 0 5	257,117 17 2	354,727 0 4

* Rs. 4,373-13-6 added on account of freight of locomotive coal carried on Jubbulpore line

EAST INDIAN RAILWAY JUBBULPORE LINE.

Approximate Return of Traffic for Week ended 3rd September 1870 on 223 miles open.

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week ...	3,075½	7,519 11 2	689 6 1	17,390 0	5,758 13 0	527 17 10	1,217 3 11
Or per mile of Railway	.....	33 11 7	3 1 10	...	25 13 2	2 7 4	5 9 2
For previous 8 weeks of half-year	26,548½	68,629 1 8	6,291 0 0	145,485 30	48,908 1 2	4,483 4 10	10,774 4 10
Total for 9 weeks	29,624	76,148 12 10	6,980 6 1	162,875 30	54,666 14 2	5,011 2 8	11,991* 8 9
Comparison							
Total for corresponding week of previous year	2,892	6,165 11 4	565 3 10	43,473 10	8,548 0 9	783 11 5	1,348 15 3
Per mile of Railway corresponding week of previous year	.....	27 10 4	2 10 8	.....	38 5 4	3 10 4	6 1 4
Total to corresponding date of previous year	26,861½	59,334 9 2	5,439 0 1	345,535 10	71,575 1 7	6,561 0 10	12,000 0 11

EASTERN BENGAL RAILWAY.

Approximate Return of Traffic for Week ended 3rd September 1870 on 113¼ miles open.

		Rs. As. P.	£ s. d.	Mds. Srs.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week	20,010	9,896 15 0	907 4 4	133,077 11	30,523 10 1½	2,798 0 0	3,705 4 4
Or per mile of Railway	177	87 6 3	8 0 3	1,175 0	269 8 5	24 14 1	32 14 4
For previous 9 weeks of half-year...	178,610	91,424 7 9	8,380 11 7	682,560 28	1,34,680 8 10½	12,345 14 4	20,726 5 11
Total for 10 weeks ..	198,620	1,01,321 6 9	9,287 15 11	815,637 39	1,65,204 3 0	15,143 14 4	24,431 10 3
Comparison.							
Total for corresponding week of previous year	20,477	11,120 12 9½	1,019 8 2	127,216 24½	27,382 6 9	2,510 1 1	3,529 9 3
Per mile of Railway corresponding week of previous year	181	98 3 2	9 0 1	1,123 0	241 12 7	22 3 3	31 3 4
Total to corresponding date of previous year	220,961	122,233 1 7	11,204 14 1	963,798 18½	1,99,105 1 5	18,251 5 11	29,456 0 0

CALCUTTA AND SOUTH-EASTERN STATE RAILWAY.

Approximate Return of Traffic for Week ended 3rd September 1870 on 28 miles open.

		Rs. As. P.	£ s. d.	Mds. S.	Rs. As. P.	£ s. d.	£ s. d.
Total Traffic for the week ...	4,186	777 12 0	77 15 6	8,539 20	261 9 3	26 3 2	103 18 8
Or per mile of Railway	150	27 12 5	2 15 7	305 0	9 5 6	0 18 8	3 14 3
For previous 22 weeks of half-year	118,970½	20,292 4 0	2,029 4 6	219,878 24	7,635 0 6	763 10 1	2,792 14 7
Total for 23 weeks ...	123,156½	21,070 0 0	2107 0 0	228,418 4	7,896 9 9	789 13 3	2,896 13 3
Comparison.							
Total for corresponding week of previous year	4,135	822 10 0	75 3 2	6,323 0	848 10 0	77 15 10	153 4 0
Per mile of Railway corresponding week of previous year	148	29 6 1	2 13 10	226 0	30 4 1½	2 15 7	5 9 5
Total to corresponding date of previous year	107,544	20,486 8 9½	1,877 18 7	240,507 9	16,898 13 0	1,503 4 5	3,281 3 4

IRRIGATION BRANCH, PUBLIC WORKS DEPARTMENT, BENGAL, ORISSA CIRCLE.

Statement shewing the amount of Traffic and Tolls on the Taldunda Canal during the month of July 1870.

LENGTH OF CANAL OPEN, 7 MILES.

LOCAL TRAFFIC.						STORES AND MATERIALS FOR IRRIGATION WORKS.						ABSTRACT.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of traffic.	Value of cargo.	Tonnage.	Tollage.
					Rs. As. P.						Rs. As. P.			Rs.		Rs. As. P.
3	Paddy ...	883	883	...	2 3 5	1	Timber, &c ...	...	441	...	1 1 8	14	Local ..	1,012	109½	9 5 3
3	Kurkutcha	129	989	...	2 7 7	8	C. S. Stone ...	...	3,331	...	8 5 3	148	Irri. works.	...	2,308½	161 9 10
1	Furniture	...	170	...	0 6 10	37	Rubble Stone	...	13,834	...	34 9 5	...	...	...	...	...
7	Empty ...	...	1,021	...	2 8 11	14	Laterite Stone	...	20,382	...	50 15 4	...	...	...	...	...
...	Demurrage	...	...	...	1 10 6	14	Lime ...	...	5,106	...	12 12 3	...	...	...	...	...
...	...	...	...	...	...	74	Empty ...	...	21,547	...	53 13 11	...	...	...	...	...
14		1,012	3,063	109½	9 5 3	148		...	64,641	2,308½	161 9 10	162		...	2,418	170 15 1

IRRIGATION BRANCH, PUBLIC WORKS DEPARTMENT, BENGAL.

Statement shewing the amount of Traffic and Tolls on the 1st section of the High Level Canal during the month of July 1870.

LENGTH OF CANAL OPEN, 26 MILES.

LOCAL TRAFFIC.						STORES AND MATERIALS FOR IRRIGATION WORKS.						ABSTRACT.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats.	Nature of traffic.	Value of traffic.	Tonnage.	Tolls paid.
					Rs. As. P.						Rs. As.			Rs.		Rs. As. P.
Str. 1	Passenger	...	1,000	...	20 0 0	1	Empty ...	...	45	...	0 8	28	Local.	3,206	137 [illegible]	39 4 7
Boats 14	Empty ...	...	664¾	...	4 3 7	1	Treasure	10,000	112	...	1 0	2	Irrign works.	10,000	5 [illegible]	1 8 0
5	Corn ...	525	1,003¾	...	6 8 0	...	...	...	...	...	...	...	...	...	...	...
4	Straw ...	21	553½	...	2 8 9	...	...	...	...	...	...	...	...	...	...	...
1	Rice ...	40	29¾	...	0 1 7	...	...	...	...	...	...	...	...	...	...	...
1	Jaggery ...	120	221	...	2 0 0	...	...	...	...	...	...	...	...	...	...	...
1	Copper ..	1,500	211½	...	2 0 0	...	...	...	...	...	...	...	...	...	...	...
1	Lead and Copper.	1,000	178	...	1 14 8	...	...	...	...	...	...	...	...	...	...	...
		3,206	3,864¼	137 [illegible]	39 4 7	2	...	10,000	157	5 [illegible]	1 8	30	...	13,206	143 [illegible]	40 12 7

IRRIGATION BRANCH, PUBLIC WORKS DEPARTMENT, BENGAL.

ORISSA CIRCLE.

Statement shewing the amount of Traffic and Tolls on the Kendraparah Canal during the month of July 1870.

DISTANCE FROM CUTTACK TO TERMINAL LOCK AT TIDE WATER, 42 MILES.

LOCAL TRAFFIC.						TRAFFIC BETWEEN CUTTACK AND SEA-BOARD.						STORES AND MATERIALS FOR IRRIGATION WORKS.						ABSTRACT.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tollage.	Number of boats.	Nature of traffic.	Value of traffic.	Tonnage.	Tollage.
					Rs. As. P.						Rs As. P.						Rs. As. P.			Rs.		Rs. As P
19	Jaggery ...	23,890	4,778	...	25 13 0	3	Salt ...	1,984	992	...	14 10 0	1	Cash chest ..	70	156	...	0 12 0	29	Local ...	29,133	225	36 2 9
1	Cotton ...	3,120	104	...	1 10 0	6	Passengers ..	10 in No.	2,581	...	36 14 0	2	Shoots	466	932	...	4 8 0	134	Through ...	3,29,104	1,471	635 8 6
1	Paddy ...	68	136	...	0 10 0	11	Spices ...	1,46,780	7,339	...	100 12 0	1	Mile Stones 42	126	200	...	1 0 0	4	Irrigation works...	662	46	6 4 0
2	Kharree ...	785	383	...	1 12 0	1	Lime ...	49	131	...	1 14 0	...	...	..	...	...	...	...	Timber ...	406	...	0 4 0
2	Passengers ...	3 in No.	160	...	1 5 9	2	Jaggery ...	2,350	470	...	6 12 0	...	...	...	...	...	...	...	...	...	...	...
3	Salt ...	1,270	635	...	4 8 0	2	Cotton ..	39,000	1,320	...	19 2 0	..	...	...	...	...	...	...	...	...	...	...
1	Empty ...	...	104	...	0 8 0	5	Teel Seed ...	8,934	2,978	...	39 14 0	..	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	Hides ...	1,806	1,806	...	28 2 0	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	29	Paddy ...	3,265	6,570	...	127 0 0	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	13	Rice ...	3,588	2,392	...	44 6 0	...	..	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	4	Gram ...	568	508	...	8 2 0	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	3	Clothes ...	41,280	2,064	...	30 12 0	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	Copper ..	75,969	987	...	15 10 0	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	51	Empty ...	..	11,049	...	161 10 0	...	..	...	...	...	...	...	...	...	...	...
29	...	29,133	6,300	225	36 2 9	134	...	3,29,104	41,187	1,471	635 8 6	4	42	662	1,288	46	6 4 0	167	...	3,59,299	1,742	678 3 3

IRRIGATION BRANCH, PUBLIC WORKS DEPARTMENT, BENGAL.

SOUTH-WESTERN CIRCLE.

Statement shewing the amount of Traffic and Tolls on the Hidgellee Tidal Canal during the month of July 1870.

LENGTH OF CANAL OPEN, 26 MILES.

LOCAL TRAFFIC.						STORES AND MATERIALS FOR IRRIGATION WORKS.						ABSTRACT.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats or rafts.	Nature of cargo.	Approximate value of cargo.	Tonnage. Maunds.	Tonnage. Tons.	Tolls paid.	Number of boats	Nature of traffic.	Value of traffic.	Tonnage.	Tolls paid.
					Rs. As. P.						Rs. As. P.			Rs.		Rs. As. P.
58	Tobacco	1,19,500	19,930	...	213 7 6	1	Planks ...	1,000	325	...	5 4 6	970	Local ...	3,43,533	* 7,256½	2,228 4 6
34	Salt	75,000	14,975	...	153 0 6	1	Bricks ...	75	675	...	3 6 0	75	Irrigation Works.	7,348	524	163 0 3
5	Cloth	10,000	925	...	7 2 6	30	Lime ...	2,310	7,700	...	97 1 6	...	...	...	...	...
10	Pottery	186	1,290	...	8 3 0	1	Iron ...	1,500	250	...	4 1 0	...	...	...	...	...
1	Plank	300	125	...	2 0 6	31	Empty ...	...	3,045	...	38 12 0	...	...	...	...	...
7	Vegetables	140	435	...	2 3 0	3	Ghooting ...	170	925	...	4 10 0	...	...	...	...	...
6	Bricks	350	3,475	...	21 0 6	2	Sand ...	80	825	...	4 2 6	...	...	...	...	...
6	Firewood	110	710	...	3 10 3	1	Soorkie ...	35	150	...	0 12 6	...	...	...	...	...
1	Lime	300	325	...	1 10 0	2	Soordree wood ...	750	300	...	1 8 0	...	...	...	...	...
13	Nuts	1,300	2,010	...	26 3 6	1	Wood Oil ...	1,100	275	...	1 6 0	...	...	...	...	...
1	Sugar	1,000	125	...	0 10 0	1	Coal Tar ...	320	80	...	1 4 9	...	...	...	...	...
3	Iron	5,550	925	...	4 10 0	1	Bamboos ...	8	125	...	0 12 6	...	...	...	...	...
3	Cotton	16,000	1,100	...	9 2 6	...	...	...	...	...	...	...	...	...	...	...
4	Grains	1,650	1,575	...	11 13 0	...	...	...	...	...	...	...	...	...	...	...
2	Thread	6,000	200	...	1 0 0	...	...	...	...	...	...	...	...	...	...	...
1	Water	...	475	...	2 6 0	...	...	...	...	...	...	...	...	...	...	...
450	Empty	...	59,490	...	650 4 0	...	...	...	...	...	...	...	...	...	...	...
36	Passenger	...	3,310	...	41 6 3	...	...	...	...	...	...	...	...	...	...	...
231	Paddy	65,910	65,910	...	924 14 6	...	...	...	...	...	...	...	...	...	...	...
42	Rice	36,650	18,325	...	91 10 0	...	...	...	...	...	...	...	...	...	...	...
9	Mats	450	3,100	...	15 8 0	...	...	...	...	...	...	...	...	...	...	...
4	Straw	100	2,350	...	11 12 0	...	...	...	...	...	...	...	...	...	...	...
5	Jute	440	220	...	2 2 3	...	...	...	...	...	...	...	...	...	...	...
6	Jaggery	2,380	595	...	4 0 3	...	...	...	...	...	...	...	...	...	...	...
32	Fish	217	1,285	...	8 8 6	...	...	...	...	...	...	...	...	...	...	...
970		3,43,533	2,03,185	7,256½	2,228 4 6	75		7,348	14,675	524	163 0 3	1,045	...	3,50,881	7,780½	2,391 4 9

J. F. STODDARD, *Lieut.-Col.,*
Asst. to Chief Engineer, Irrigation Branch, Bengal.

IRRIGATION BRANCH, PUBLIC WORKS DEPARTMENT, BENGAL.

SOUTH-WESTERN CIRCLE.

Statement shewing the amount of Traffic and Tolls on the Midnapore Section of the High Level Canal during the month of July 1870.

LENGTH OF CANAL OPEN 27 MILES.

LOCAL TRAFFIC.						STORES AND MATERIALS FOR IRRIGATION WORKS.						ABSTRACT.				
Number of boats.	Nature of cargo.	Approximate value of cargo.	TONNAGE. Maunds.	TONNAGE. Tons.	Tolls paid.	Number of boats or rafts.	Nature of cargo.	Approximate value of cargo.	TONNAGE. Maunds.	TONNAGE. Tons.	Tolls paid.	Number of boats	Nature of traffic.	Value of traffic.	Tonnage.	Tolls paid.
					Rs. As. P.						Rs. As. P.			Rs. As. P.		Rs As. P.
10	Coal	1.424	4.575	...	24 7 0	15	Coal ...	4,830	17.450	...	105 14 6	2,214	Local ...	10,16,554 0 0	12,925¼	1,671 2 9
26	Cotton	36,480	9,120	...	42 9 3	..	... ...	...	...	...	...	...	...	...	...	...
10	Firewood	130	2,175	...	9 9 0	...	... ...	...	...	...	...	...	...	...	...	...
33	Grains	9,800	6,125	...	22 15 0	...	... ...	...	..	...	..	...	...	...	...	...
10	Hides and horns ...	8,550	2,375	...	10 14 6	...	.. ...	...	...	...	...	...	...	...	...	...
64	Jaggery and sugar ...	43,496	18,125	...	75 3 9	...	... ...	...	...	...	...	...	...	...	...	...
2	Jute	500	250	...	0 15 0	...	... ...	...	...	...	...	...	...	...	...	...
52	Metals	1,85,350	18,535	...	69 10 0	4	Metals and Stores	4,350	1,025	...	6 3 6	...	...	...	...	...
472	Miscellaneous	88,210	89,965	...	327 13 3	7	Miscellaneous ...	2,549	1,950	...	11 2 6	...	...	...	...	...
108	Oil and oil-seeds ...	24,279	34,090	...	142 6 0		... ...	...	...	...	...	...	...	...	...	...
56	Paddy and rice ...	18,312	14,650	...	55 12 6	...	... ...	...	...	...	...	...	...	...	...	...
25	Piece Goods	5,297	5,100	...	33 4 6	...	... ...	...	...	...	...	...	...	...	...	...
85	Pottery	236	8,625	...	32 13 0	...	... ...	...	...	...	...	...	...	...	...	...
44	Salt	34,150	17,075	...	78 13 3	...	... ...	...	...	...	...	...	...	...	...	...
85	Silk and Indigo ...	4,70,080	5,875	...	23 6 0	...	... ...	...	...	...	...	...	...	...	...	...
5	Straw	257	2,075	...	10 0 6	...	... ...	...	...	...	...	...	...	...	...	...
42	Tobacco	89,872	18,725	...	97 1 9	...	... ...	...	...	...	...	...	...	...	...	...
853	Passengers	.....	No. 6281	...	52 8 3	...	... ...	...	...	...	...	...	...	...	...	...
326	Empty boat	.....	96600	...	481 0 6	14	Empty boat ...	...	5,050	...	27 1 0	...	...	...	...	...
	Miscellaneous revenue ...	.....	...	...	75 8 9	...	... ...	...	...	...	...	...	...	...	...	...
1	Rafts of timber ...	100	Logs 2	...	0 8 0	...	... ...	...	...	...	...	...	...	...	..	...
5	Ditto of bamboos ...	31	325	..	1 2 0	...	... ...	...	...	...	...	...	...	...	...	...
1	Bricks	50	450	...	2 13 0	...	... ...	...	...	...	..	40	Irrign. Works ...	11,729 0 0	910	150 5 0
2,214		10,16,554	3,61,808	12,925¼	1,671 2 9	40		11,729	25,475	910	150 5 0	2,254		10,28,283 0 0	13,835¼	1,821 7 9

CALCUTTA,
The 13th September 1870.

J. F. STODDARD, *Lieut.-Col.*,
Asst. to Chief Engineer Irrigation Branch, Bengal.

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No. 38 of 1870

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 21, 1870.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT, *separately, on payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.*

Reports of the Municipalities in the Patna Division.

From R. P. JENKINS, ESQ., Commissioner of the Patna Division, to the Secretary to the Government of Bengal, Judicial Department,—(No. 302, dated Camp Gya, the 24th August 1870.)

I HAVE the honor to forward herewith the administration reports, together with the accounts of receipts and disbursements of the several municipalities in this division for the past year. The report of the Arrah municipality was not received till the 20th ultimo, and hence the delay.

2. There were, as hitherto, the following municipalities in this division during the year under review :—

I. Patna, II. Gya, III. Chupra, IV. Mozufferpore, V. Durbhanga, VI. Arrah.

3. The subjoined table shows the financial results of the municipalities for the year under report :—

Municipalities.	Balance on the 1st April 1869.	Receipts during the year.	Total.	Charges during the year.	Balance in hand.
	Rs.	Rs.	Rs.	Rs.	Rs.
Patna ...	7,960	1,25,815	1,33,775	73,709	60,066*
Gya ...	9,742	25,659	35,403	23,812	11,591
Chupra ...	5,552	25,688	31,240	30,977	263
Mozufferpore ...	19,583	21,485	41,069	33,726	7,343
Durbhanga ...	88	14,398	14,486	14,307	179
Arrah ...	4,094	12,669	16,763	14,904	1,859

4. One and all, the municipalities appear to have conducted their affairs tolerably carefully and satisfactorily, and the progress of sanitary and other useful measures of improvement, as reported by them, is on the whole satisfactory. The chairmen of the Gya and Mozufferpore municipalities have been requested by me to apply the surplus in their hands to some useful works.

5. The Patna municipality have, it will appear, proposed the construction of two new works, and asked for a grant from Government. I have however, pointed out to them that Government very lately made a grant of a lac of rupees from the sale proceeds of the Wahabee estates for the improvement of the city, and that they cannot fairly expect any further assistance at present. I have, at the same time, requested the chairman to expend a portion of the large surplus now remaining to his credit in cleaning the pool called Shaikh Mitta Garhi. This place at present is really a great nuisance, and must be very obnoxious to health.

* (This sum includes Rs. 27,169 on account of sale proceeds of the Wahabee estates.)

From A. C. MANGLES, ESQ., Chairman, Municipal Commissioners, Bankipore, to the Commissioner of the Patna Division,—(No. 16, dated Bankipore, the 27th April 1870.)

WITH reference to Government order No. 2441 of the 27th April 1868, I have the honor to submit, in duplicate, my administration report of the Patna city municipality for the official year 1869-70.

2. *Committee.*—The committee consists at present of 13 official and 6 non-official members; of the 13 official members 5 are so ex-officio, and the rest are European and Native gentlemen holding appointments under Government, excepting one, who is employed in the Bank.

3. *Meetings.*—There have been monthly meetings for the examination and audit of the monthly accounts, and for the disposal of other important business; as well as bi-weekly meetings for the disposal of cases of breach of municipal laws and bye-laws.

4. *Assessment.*—Ever since the extension of Municipal Act (III. of 1864), the maximum rate of house tax, *viz.*, 7½ per cent., has all along been levied, and the same has also continued during the year under report, yielding Rs. 51,516-13-0 as house tax, raised from 33,785 houses.

5. *Collection.*—Of the entire amount of house tax, *viz.*, Rs. 51,516-13-0, the sum of Rs. 2,496-6-8 only remained unrealized at the close of 1869-70; the same * being mostly due from people reduced to very narrow circumstances, whose names on the result of the local investigations held by the municipal commissioners have been struck off. Civil cases in the Small Cause Court have been instituted against 84 defaulters, and, pending the decision of the court, the amounts cannot be realized.

	Rs.	As.	P.
Struck off already	1,467	15	0
Realized in April 1870	173	2	0
Under investigation	127	0	0
With Naib Buxshee	21	9	0
In civil court cases	134	0	0
The Collector of Shahabad from property of Moula Bux deceased under attachment	13	8	0
For European gentlemen	169	10	8
Under warrant	340	2	0
With the Moharance of Tekaree	58	8	0
Total ...	2,496	6	8

Rs. 10,631-14-7 of previous years have also been realized within the year under report. Rs. 672-2-0 of the same yet remain to be realized. The collection department have latterly worked in right earnest, and have given me satisfaction, notwithstanding the crippling of their resources by the abolition of four duffadars in December last.

6. *Establishment.*—The establishment, as per detail, cost Rs. 6,193-10-9; whilst the net collection of house tax only was Rs. 60,209-15-8, shewing a percentage of 10¼ per cent. This establishment will probably continue increasing, as the municipality extends its operations and introduces more improvements.

7. *Pounds.*—There are four pounds in charge of this municipality, and their proceeds were meant to augment the municipal income; but it is now found that, far from contributing towards the municipal income, they are not even self-supporting in themselves, and consequently are a burden to the municipality.

8. *Municipal Cases.*—There were 587 cases of breach of conservancy rules, including 122 cases on the file at the close of the previous year; of these, 506 cases have been disposed of, and 81 were still pending on the 31st March last. The net amount realized in the shape of fines was Rs. 617-14-0 to Rs. 407-7-0 of the previous year, showing an increase of Rs. 210-7-0.

9. *Civil.*—The municipality was sued in the civil courts in 7 cases, and the municipality instituted 85 cases during the year under report; of these 85 cases, 84 are still pending, and in one a modified decree was obtained.

10. *Stamps.*—Stamps to the amount of Rs. 210-15-0 were sold on purely municipal business. Government therefore has been benefited to the above amount.

11. *Sanitation.*—The sanitary condition of the city is not so satisfactory as is wished. During the year under report the river Ganges, which used to supply the inhabitants with drinking water, has thrown up a large chur on the north of the city. To all residing in the interior of the town, the select wealthy few excepted, this circumstance has been a very great misfortune; inasmuch as they are precluded from going to the river for the daily supply of fresh water for drinking and other purposes. Cut off from this great resource, the inhabitants have resorted to their wells. Considering the fact that—firstly, water in all the wells is not wholesome; secondly, that the streets in the city are very narrow; and thirdly, the absence of drainage, it is not a matter of surprise that cholera or small-pox periodically breaks out with more or less virulence.

12. *Improvements.*—The exertions of the municipal commissioners are almost paralyzed for want of funds; they cordially co-operate with the Government in all matters of improvement. They reduced their own expenditure in the very middle of the year to provide funds for the new road from Chowk to Patna city station, sanctioned in Government letter No. 2418, dated 6th April 1869; and although they have paid their moiety in full, they regret to see that the work is not yet taken up. They are about to turn the proceeds of the Wahabee estates to the best account by erecting a municipal market on the site of the house of the Wahabee traitors, the proceeds of the sale of which supply the funds. To remedy the evils of narrow streets, &c., above stated, they now contemplate to widen to 40 feet the existing road from Chowksheekarpore thannah to Puchimdurwaza, as shown in the accompanying plan. They further contemplate to reclaim the pool in the very heart of the city, known as *Shaikh Mittā Gurhi.* During the dry season the inhabitants throw all sorts of fifth into this pool, and being naturally lower

than the surrounding neighbourhood, it is metamorphosed during the rains into a large pool, decomposing all sorts of filth previously thrown there, and producing gases detrimental to human life. The municipal commissioners are of opinion that this *Shaikh Mitta Gurhi* is the nucleus of cholera and small-pox which breaks out annually in the city; they contemplate therefore converting this pool into a large tank with fruit trees around. They consider this to be a reproductive work, as both the fishery and the fruits of the trees will hereafter bring a handsome return on the capital that may now be invested in it; whilst it will be of primary importance to the people in the city both as to the supply of drinking water and for sanitary purposes.

13. The municipal commissioners beg to urge on the Government to kindly extend the grant-in-aid system for the completion of the above works: the municipality will be but too happy to provide a moiety of the estimate, which can be framed as soon as the sanction of the Government to the above proposals is known.

14. *Watering.*—The whole length of the main road, from Bankipore to the city, is now being watered by carts, but want of water is being severely felt, especially at this season of the year when the wells get dry. Want of a sufficient number of wells is another drawback. The inhabitants do not like to part with the water of their own private wells. It appears that the old wells were sunk at random, without any reference to the lowest water level of the Ganges, the consequence of which is that many of them are not sufficiently deep to contain water all the year round, but gradually dry up as the river water recedes after the rains. Had a line of levels been taken, then the scarcity of water in the wells at this season of the year when it is most wanted would not have been felt. A new well is being sunk, and it is in contemplation to sink three more as soon as lands for them can be obtained.

15. *Conservancy.*—In the suburbs of the city, *viz.*, in the civil station, conservancy has been well attended to throughout the year; but in the city it is far from being satisfactory, and until such time as the present lanes and bye-lanes are widened, so as to admit conservancy carts into them, I am afraid it will not be so satisfactory as is wished. To remedy the evil, the municipal commissioners have lately constructed some small single bullock conservancy carts for the city, and, their working remains to be seen. Undoubtedly, however, these carts will improve the conservancy of the city a great deal, though not to the extent I should wish.

16. *Roads.*—The municipal commissioners have got upwards of 30 miles of road under their charge, and with the small amount they can annually allot for them, they are of opinion that these roads have been pretty well looked after, considering the large reduction in the allotment made in the middle of the working season, *viz.*, in December last, to provide for funds for the Chowk road sanctioned in Government letter No. 2418, dated 6th April 1869. The expenditure incurred under this head includes the cost of small drain bridges constructed on the streets branching off from the main road. These were very urgently needed, as tending to interfere with the traffic of the neighbourhood. The material used up to date for metalling the roads was Rivelgunge kunkur. This is about to be superseded by stones procured from the bed of the river Soane. To ensure thorough consolidation, a coating of Rivelgunge kunkur will be put on the surface, so that as this kunkur wears away, the dust of it will fill up the interstices of the stones and tend to bind the whole into a solid and compact mass.

17. *Lighting.*—During the year under report, the sum of Rs. 446-14 was expended from the savings of the budget to purchase posts and lanterns, &c., as it was decided by the municipal commissioners that the main street should be lighted from the 1st instant; the lamps (160) have been erected, and the lighting bill commence with the new year.

18. On the whole, I am of opinion that the commissioners may congratulate themselves on having had a fairly successful year, and I trust that after a perusal of this report you will agree with me in so thinking.

PATNA CITY MUNICIPALITY.

Municipal Improvement Fund, under Act III. of 1864, *for the year* 1869-70.

Nature of Receipts.	Rs.	As.	P.
Balance of house-rate collections, &c., on the 1st April 1869, brought forward ...	7,960	0	0
Amount collected on account of the rate of 7½ per cent. on the annual value of houses, buildings, and lands	60,209	15	8
Amount collected on account of fines, &c., under Act III. of 1864	617	14	0
Amount collected on account of tolls on town ferries as per Government order No. 4768, dated 5th August 1865	24,089	11	0
Proceeds of cattle pounds in the city under Act III. of 1856	429	10	3
Amount collected on account miscellaneous receipts, *viz.*:—			
Fees on music processions	1,366	0	0
Rent of land let out for grazing purposes, &c.	321	12	0
Fees on licenses	24	0	0
Refund cost of wooden labels	596	6	0
Refund account repairs to municipal office	626	8	0
Proceeds of confiscated estates of the Patna Wahabees on 1st April 1869, brought forward	36,725	3	9
Ditto ditto Wahabees credited during the year	1,018	3	3
Total ...	1,33,985	3	11
Deduct discount paid for changing pice into silver coin	209	14	6
	1,33,775	5	5

NATURE OF CHARGES.	Rs.	As.	P.
Charges incurred in the collection of 7½ per cent. on the annual value of houses, lands, &c., from March 1869 to February 1870	3,013	7	0
Conservancy charges from March 1869 to February 1870	6,481	9	9
Amount paid to the district treasury for the maintenance of police under section 34, Act III. of 1864, from March 1869 to February 1870	23,667	3	1
Widening the Durga road	800	0	0
Amount expended for the construction of a new road from Chowk to the railway station at Begumpore	13,461	0	0
Amount expended in repairs of pucca roads	9,901	5	6
Ditto of kutcha roads	807	2	3
Ditto on account construction and repairs, drains, and culverts	1,044	14	6
Ditto on account of miscellaneous works	382	13	9
Ditto repairs to lanes and drains in the city	1,382	8	6
Road establishment from March 1869 to February 1870	1,210	0	0
Amount expended on account of the pound establishment of the city from March to February 1870	444	4	9
Amount expended for watering the main road of the city for seven months of the year ...	4,092	10	6
Ditto for lighting the streets	446	14	0
Establishment of the office of the municipal commissioners constituted under Act III. of 1864, from March 1869 to February 1870	3,180	3	9
Contingencies	2,222	4	11
Miscellaneous charges	231	7	6
Cost of vaccine establishment from March 1869 to February 1870	366	0	0
Amount paid account compensation for taking up lands, &c., for a bazar at Sadickpore out of proceeds of Wahabee estate	573	11	3
By balance, viz.—			
On account of house-rate collections, &c.	22,896	0	8
On account of the proceeds of the confiscated estate of the Patna Wahabees ...	37,169	11	9
Grand Total	1,33,775	5	5

A. C. MANGLES,
Chairman of the Municipal Commissioners.

Patna City Municipality, the 27th April 1870.

From H. KEAN, ESQ., Joint-Magistrate of Gya, to the Commissioner of Patna,—(No. 22, dated Gya, the 9th July 1870.)

I HAVE the honor to submit the Municipal Administration Report, called for in your letter No. 136 of the 28th ultimo.

2. During the past year no undertaking of any special interest or importance was commenced, the resources of the municipality not being in a state as yet to admit of any extensive measures for the improvement of the town; but minor conservancy arrangements have been attended to, and endeavours have, as far as means would allow, been made to introduce a better state of things. There remains, however, very much to be done, and indeed, until a regular system of drainage is effected, the conservancy cannot be entirely satisfactory.

3. The conservancy has been carried out by an establishment of at first 33 domes, subsequently reduced to 26, and 3 burkundazes (reduced in November to one), who work with 13 bullock carts at an expense of Rs. 2,529-2 yearly. The municipal roads have been kept up at an expense of Rs. 3,045-5-6; the main thoroughfares have been in good order.

4. The rate assessed for the year was 7½ per cent. on the gross amount of the house rental. Complaints against the assessment were few, tending to show that the town is not on the whole over-assessed, though the rate is the maximum allowed by the Act. The tax is collected by a staff of 10 tax collectors, a darogha, 2 naibs, and 2 pyadas, the yearly expense of collection being Rs. 1,354-13-6. The total sum collected during the year amounted to Rs. 25,227-9-1, leaving a balance to be collected at the close of the year of Rs. 1,722-3. This includes Rs. 1,189-9-1, arrears for the former year.

The following native gentlemen were added to the committee during the year:—

Baboo Oomesh Chunder Sirkar.
Baboo Srikissen Chatterjee.
Moulvie Mohumud Hafiz Reza.
Seikh Abdool Kadir.

5. The health of the town during the past year was, on the whole, good, no epidemics visited the place, though bowel complaints prevailed during the hot months. The old town of Gya suffered less than Sahebgunge. The heat during the past year was very great, the thermometer ranging in May up to 115° in the shade; many deaths from heat apoplexy ensued in consequence.

6. The receipts for the year ending March 1870 were Rs. 25,659-8-2, and the expenses for the same period Rs. 23,812-13-9, leaving a balance in hand of Rs. 1,846-10-5, which with the balance of the former year of Rs. 9,743-7-11, makes a total to the credit of the municipality of Rs. 11,590-2-4.